

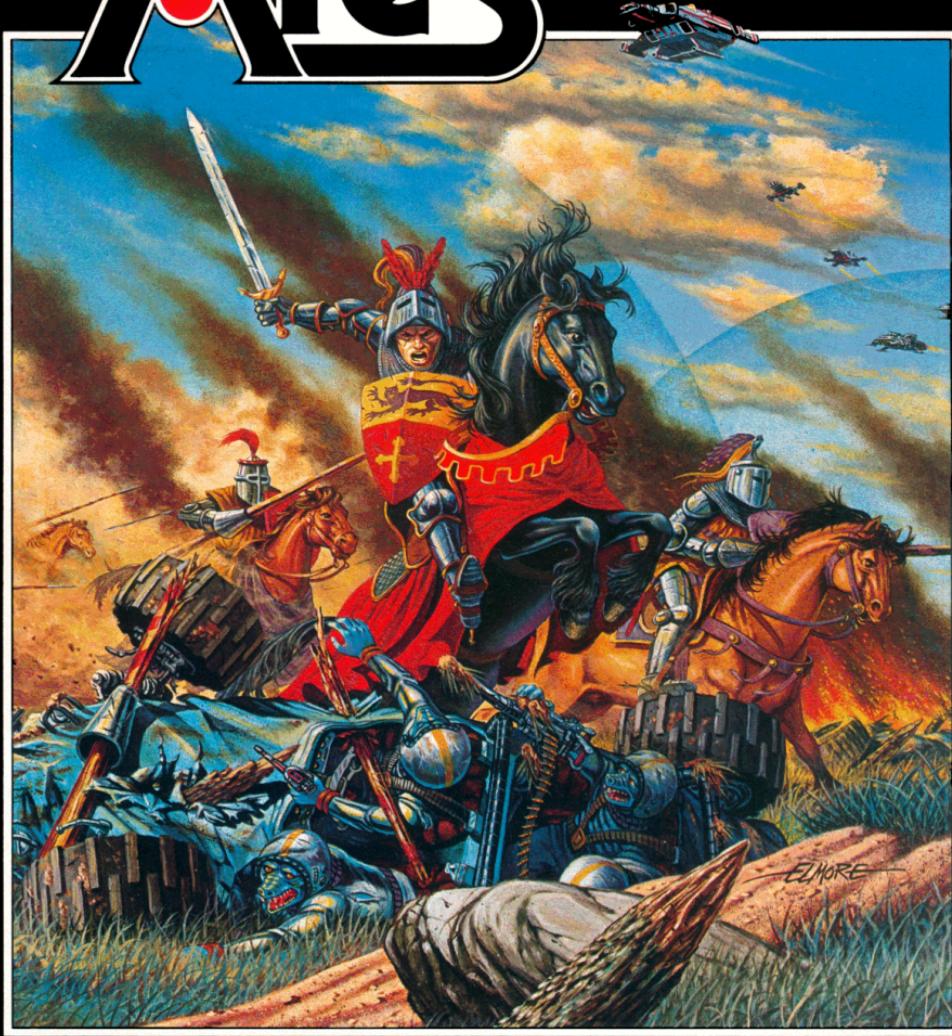
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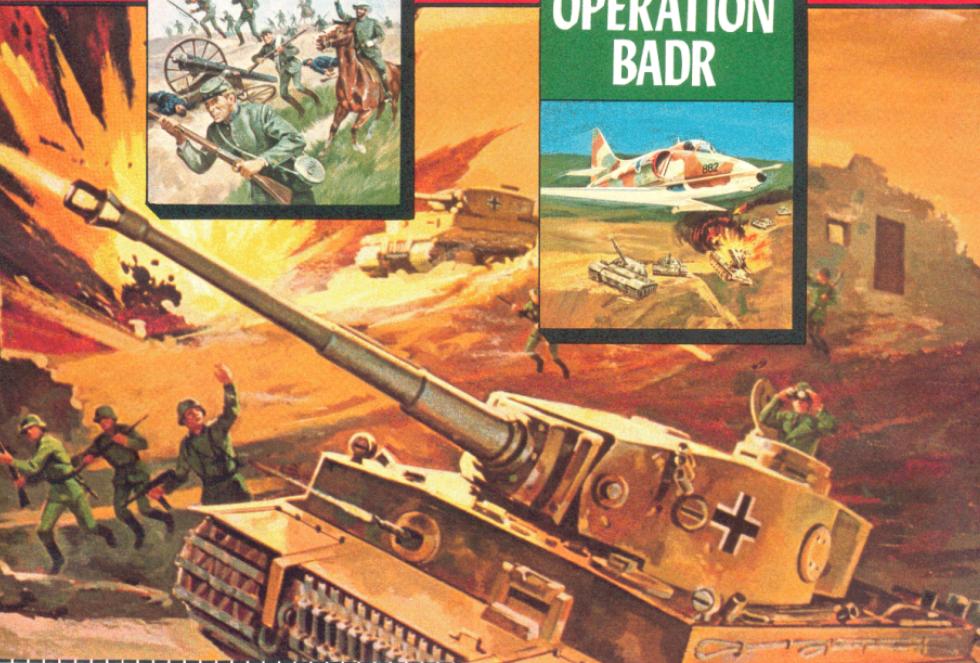
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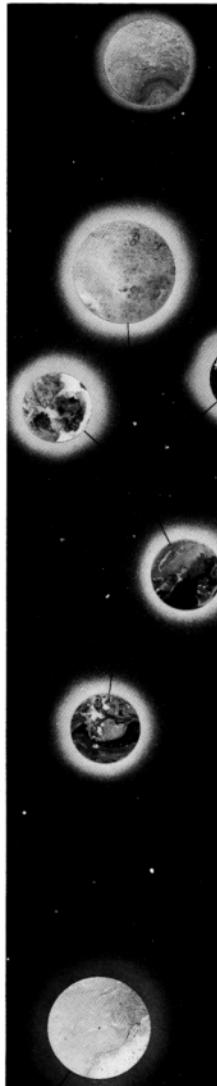
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David Cook

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ON THE COVER
THE HIGH CRUSADE illustration by
Larry Elmore.

ARES™ Magazine Number 16**Winter 1983****THE SCIENCE FICTION
GAMING MAGAZINE**

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LOG**Ares**

Welcome to a new issue of ARES™ Magazine, and a very special one it is. The themes for this issue are galactic empires and, curiously enough, barbarians in SF (something along the lines of King Arthur in Space, or The Savage Laser of Conan).

The core of this galactic issue is three-fold: Imprimis, we present "Quest," a story by Poul Anderson that spins a tale of knights and chivalry and interstellar warfare. "Quest" continues the action from his earlier novel, *The High Crusade*, in which a medieval English baron conquers a star empire — a difficult enterprise, certainly, and well worth the reading.

Secundus, a treatise on Galactic Empires, and how to put one together in your spare time. A superb extrapolation into the distant future, this article is invaluable as reference material for science-fiction game referees who are constructing such empires for their campaigns. It makes fascinating reading for everyone.

Tertius, is THE HIGH CRUSADE™ Game, based on Poul Anderson's original novel, for the delight of all boardgaming fanatics. Players take the sides of either the blossoming power of the English Crusaders, or the star-spanning might of the Wersgorix Empire. Politics, battle fleets, and treachery fire the action and guarantee many enjoyable sessions at the gaming table.

The outlying regions of this issue sparkle with other stars. Dr. Robert Freitas Jr., author of "Galactic Empires," speculates upon tax-collection and The End of the World. Ken Ramstead adds a new twist to a previous ARES game — THE RETURN OF THE STAINLESS STEEL RAT™ game from issue #10; Harry Harrison's interstellar rogue has a nasty surprise waiting for him right when things look rosiest. Two variant articles related to the TRAVELLER® game address the concepts of empires and barbarians separately: the Sydymic Empire of Judges Guild's Gateway Quadrant is described, and an expanded character generation system for Barbarian characters is included as well.

In our regular departments, Christopher John moans and groans and tears out his hair over two new science-fantasy films, while Steve List takes a good look at FASA's new STAR TREK™: The Role-Playing Game system; the rakish Kim Eastland reviews some interesting science-fiction miniatures on the market; our man in Los Angeles, David Schow, discusses novelizations and the science-fiction movie trade; and Greg Costikyan thumbs through a few of the newest books on the bookstore shelves. Finally, the story of "Ringshipper," Roger Raupp's science-fiction adventure, continues with a remarkable discovery.

Two last things before you go. We seem to be getting a good response on the feedback cards from issue #15. Thanks! and keep those cards coming. A new letters-to-the-editors column debuts with this issue, and if you've ever wanted to say more than the feedback card allowed, now you have the chance to be heard.

We would also like to extend our thanks to Yerkes Observatory, in Williams Bay (just a hop & skip from Lake Geneva) for the two beautiful galaxy photographs that appear in the "Galactic Empires" article. Visiting the observatory was a nice treat for your editors. Looking over the photographic plates of distant galaxies was a strangely moving experience: to try and imagine something that vast, and that far away. . . .

"There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy." (*Hamlet*, Act I, Scene 5)

The Editors

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You're the Captain of a small space freighter. On what should have been a routine landing at Cerinath, your ship is ordered to remain in orbit. In minutes an Imperial Cruiser matches orbits and sends across a boarding team. Shortly, they unearth some hidden contraband drugs. Worse, you had no idea they were on your ship! You've been set up! As you and your four man crew are shuttled over to the Cruiser, you're determined to return to your last port of call and find out what's behind this ... IF you can keep from being locked away in the lowest jail on Cerinath!

You and your partners go over what seems like the hundredth set of scanning reports. You're trying to locate the daughter of Bradon Harkman, a VERY wealthy industrialist. Her ship was lost in this area, and he hired YOU rather than turn to his own corporate resources because you specialize in this type of thing, and you're GOOD at it! This is the only habitable planet in the sector, tho it remains uncolonized due to the severely lethal life forms native to it. If Harkman's daughter DID get here in a lifepod, finding where it landed will be the EASY part!!

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Reading through my back issues of ARES™ Magazine, I came across a statement in the *Questing* column of issue #12 which informed me of DRAGON-QUEST™ game addenda. Being the owner of a first-edition set, I would appreciate finding this material.

Rik Croy
Appleton, WI

At the moment, we don't have any "catch-up" sheets for first-edition DRAGONQUEST game players. The only thing to do, as always, is to find someone with a second-edition set and make the appropriate changes in your rules books, or just buy the new edition.

In ARES Magazine #15, Kim Paffenroth reviews Task Force's MOON BASE CLAVIUS™ game. I have never played this game or even read its rules, so the following comments have nothing to do with the game itself, merely the review.

The review contains this paragraph: "One of the most universally accepted rules in the gaming industry is the way in which a piece's Zone of Control is treated. In every game I have ever played which included Zones of Control, a marker's piece's Zone of Control is the six hexes surrounding the marker piece; enemy markers' pieces moving into one of these six hexes must stop all movement and must attack the marker piece. In MOON BASE CLAVIUS game, marker's pieces can go through enemy Zones of Control by paying an extra movement point and need not attack the opposing marker piece. This sounds like another "revolutionary" idea, but all it really does is make strategies almost impossible, as enemy units can run circles around your forces."

This paragraph is remarkable, to say the least. As far as I can recall, the concepts of fluid ZOCs and voluntary attacks were first used in Simulations Publications Inc.'s, original KURSK game somewhat over 10 years ago and have also appeared in literally hundreds of games since. In fact, THE OMEGA WAR™ game in ARES Magazine #14 makes use of these concepts.

The review contains many other gaffes which I will not go into, since the quoted paragraph alone is enough to support some recommendations. Task Force

deserves some kind of public apology or retraction, and the editors should pay more attention to the review submissions which cross their desks.

John Harshman
Bloomington, IL

After speaking with several other people here at TSR, Inc., it appears that John is correct in saying that fluid ZOCs and voluntary attacks made by boardgaming pieces have been around a long time. The review was in serious error here, and on behalf of ARES Magazine, we offer our apologies to Task Force Games for running those remarks. We also offer the thought that the current editors of ARES Magazine were not in charge of producing and editing ARES Magazine #15. Nonetheless, we will do our best to treat game reviews with care and will check out what is said about the games before running said reviews. We are forming a games library here in our offices to help clear up problems such as the above.

I was very much surprised and a little torn over your ultimate decision concerning DRAGONQUEST material being transferred from ARES Magazine to DRAGON® Magazine. I resubscribed to ARES Magazine largely because of DRAGONQUEST game material that it ran and I admit to having a little resentment that DRAGONQUEST game articles may no longer appear in these pages. At the same time, I like the possibility that in DRAGON Magazine we might be able to see a DRAGONQUEST game article every month, rather than just four to six times a year.

Please let me know when the first DRAGONQUEST game articles will appear in DRAGON Magazine so that I can start putting together the money for a

DRAGON Magazine subscription in plenty of time.

Craig H. Barrett
Las Vegas, NV

DRAGON Magazine, as per the policy statement that appears on pg. 43 of issue #15, will cover fantasy and other non-SF gaming material from now on. This includes all DQ game material, a considerable amount of which was turned over to Kim Mohan, the DRAGON Magazine editor-in-chief. If anyone wants to submit articles on the DRAGONQUEST game system, please send such articles to DRAGON Magazine; TSR, Inc., does support the DRAGONQUEST game system, and your submissions will go a long way to help. DRAGON Magazine has already started printing DQ game articles recently, with "The Thrill of the Hunt" in DRAGON Magazine issue #78.

I am interested in writing for ARES Magazine. Please send me a copy of your editorial policy and information on submitting material to you.

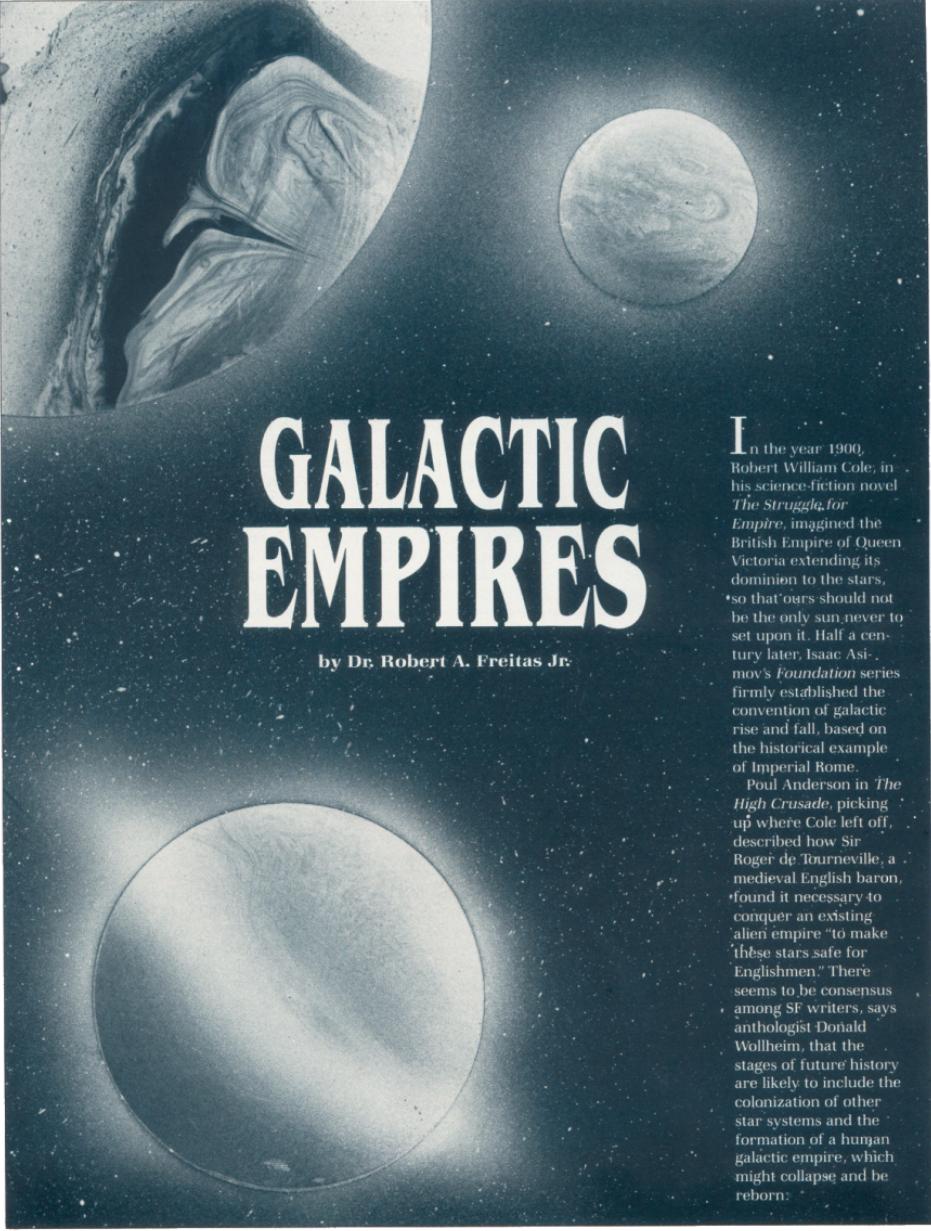
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At the moment, our only requirements are that whatever material is submitted to us be typed, double-spaced, on one side of the paper only; a self-addressed stamped envelope must accompany every submission whenever possible to facilitate a reply. Manuscripts should also have a 1" margin all around the pages, and be legible. We are, of course, interested in science-fiction and science-fantasy game material, including superhero games, post-holocaust games, and futuristic starship-and-raygun games. Both board and role-playing games will be covered in this magazine. Beyond that, we'll look at anything you send us; this is your magazine.

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GALACTIC EMPIRES

by Dr. Robert A. Freitas Jr.

In the year 1900, Robert William Cole, in his science-fiction novel *The Struggle for Empire*, imagined the British Empire of Queen Victoria extending its dominion to the stars, "so that others should not be the only sun, never to set upon it. Half a century later, Isaac Asimov's *Foundation* series firmly established the convention of galactic rise and fall, based on the historical example of Imperial Rome.

Poul Anderson in *The High Crusade*, picking up where Cole left off, described how Sir Roger de Tourneville, a medieval English baron, "found it necessary to conquer an existing alien empire" to "make these stars safe for Englishmen." There seems to be consensus among SF writers, says anthologist Donald Wollheim, that the stages of future history are likely to include the colonization of other star systems and the formation of a human galactic empire, which might collapse and be reborn.

Empires have gotten an awful reputation, though. In the *Star Trek* television series, the benevolent Federation is always fending off the warlike Romulan and malevolent Klingon empires. Ming the Merciless on the television show *Flash Gordon* slates Earth for extermination because our questioning minds present a possible future challenge to his star kingdom. The Empire in the movie, *Star Wars*, personified by Darth Vader, is unquestionably evil.

In some cases, interstellar empires might be ideal. They need be neither totalitarian nor autocratic. But are they really possible at all? Or are they just simple-minded extrapolations from earthly history, with little relevance for the future?

Solar Civilizations

All societies need energy. To run a really big spacefaring society, you need *lots* of energy. The members of a galactic empire will probably all be solar civilizations. We might reach this stage ourselves in the not too distant future. Here's how.

Human activity in antiquity was marked by slow growth in worldwide energy usage, no more than 0.3% per year with a doubling time of 200 years. It is believed that the Roman Empire at the height of its expansive construction and military activities used about 10^1 (1 followed by 9 zeroes, or one billion) watts of power. In the last 200 years, mankind has sustained a 3% annual energy growth rate with a doubling time of decades rather than centuries. In just two millennia of cultural evolution, human civilization has increased its total power output ten-thousand fold to about 10^{12} watts.

But planetbound societies cannot expand indefinitely. All forms of energy, whether electrical, mechanical, nuclear or solar, ultimately return to the biosphere in a single degraded form: heat. As more and more of this thermal pollution is liberated at the surface of a developing world, global mean temperature rises and the precarious energy balance upon which all life depends deteriorates.

Eventually every burgeoning species bumps into the heat limit — the total energy that may be released by a technological society without causing irreversible ecological destruction. Scientists estimate that the thermal carrying capacity of Earth is 10^{10} watts, roughly 1% of the total solar influx. At our present rate of growth, we smack the barrier in A.D. 2135.

Is this problem insurmountable? Not if

we continue our development in space. Few expansionist races who reach our level of planetary civilization could miss this golden opportunity, especially since surface-to-orbit transport can be quite cheap. For example, each year humanity spends a few percent of its energy on aviation. A few percent of the 10^{13} watts available to a developed planetary society could loft into low Earth orbit more than a trillion kilograms — the mass of New York City — every year.

Physicist Freeman Dyson, of the Institute for Advanced Study at Princeton, suggests that an intelligent species might rearrange the matter of its solar system into a shell of material around its star to gather solar energy more efficiently. A single world intercepts a billionth of its sun's output, whereas a growing spacefaring society can gather energy from any position along a geometrical spherical surface surrounding the central star. This means power billions of times greater than can safely be released on the mother world. Imagine swarms of huge solar cells, each wide as a continent, orbiting the Sun in successive shells about as far from the Sun as the Earth is. About ten billion of these collectors would make a virtually opaque "Dyson Sphere," absorbing the entire solar output (about 10^{12} watts) and directing it to the purposes of the booming interplanetary industrial complex.

At this point in our future evolution, writes former U.S. Foreign Service Officer Michael A.G. Michaud, "our descendants may shrink from the challenge of interstellar flight, concluding that the solar system should be the limit of human ambition, and accepting the end of humanity when the Sun dies a few billion years from now. Or they may begin the outleap, sprinkling our part of the galaxy with human colonies. Once founded, star colonies would change the conditions for interstellar flight by providing civilization destinations." Engineers from the British Interplanetary Society, NASA and elsewhere already have done design studies of interstellar probes and large habitats in space. If the humans of that future colonial age find the political and technological means to hold their expanding realm together, says Michaud, "they may create a human empire in the stars."

A Galaxy of Possibilities

Our Milky Way is a spiral galaxy much like the beautiful spiral in Andromeda. Viewing it as a geographer looking for interesting patterns, we find that galaxies like ours are mostly made up of

stars found in three places — Disk, Core and Halo.

The Disk, the most likely place for life, has about 250 billion suns and is 100,000 light-years (the distance light travels in a year, about 6 trillion miles) in diameter and 3,000 light-years thick. Astronomers have found four spiral arms in the Milky Way. These arms are not concentrated regions of stars but rather gas compression zones of active star formation — stellar nurseries — which is why they are bright. They have ten times more gas, but only a few percent more stars, than the inter-arm regions where our Sun is. Interstellar empires are most likely to get their start in the Disk.

The Core, about ten thousand light-years in diameter, lies at the hub of the Galaxy. There, stars are packed together a million times more densely than out in the Disk. Years ago, science-fiction writers dreamed of vast Core empires, but these dreams have faded as astronomers found galactic nuclei be scenes of incredible violence, shaken by titanic explosions, rippled by shock waves carrying billions of star-masses racing outward from the center. Any planets would be savagely ripped from their orbits following near-collisions of neighboring suns every million years or so, making the evolution of life very unlikely.

The Halo remains a mystery, since it cannot be observed directly but must be inferred by indirect evidence. Once thought to be relatively unimportant, astronomers now believe the Halo contains 80-90% of the total galactic mass. This is necessary to make enough gravity to prevent the Milky Way from flying apart. Astronomers don't have any idea what is out there in the halo — possibly a trillion unknown dim red stars, or a larger number of vagabond Jupiter-like worlds, or black holes, or? . . . Perhaps the Halo is the first real evidence of a galactic empire — the "missing mass" may be dammed-up star-stuff, stored in great Imperial depots near Dyson spheres surrounding the remnants of the vast majority of stars in the Milky Way.

What if such an empire already exists? Undeveloped, nontechnological, or mere planetary civilizations like ours probably will have nothing to interest an empire. Primitive star systems, while admittedly possessing abundant natural resources, cannot easily be exploited and will be regarded by the Empire much as we regard Antarctica and the Moon. Our resources can be tapped by the galactic community only if there is a large-scale,

thriving local solar civilization which can afford to engage in interstellar shipping. So the Empire will wait until we get our interplanetary industrial complex in order before it contacts us, demanding tribute.

The Psychology of Empire

As yet we've met no alien races, and haven't established our own empire in the stars, so we have no way of knowing whether the very concept of "empire" is peculiar to human thought patterns or has more universal appeal. Obedience to organizational authority may be a peculiarly human trait. A race of intelligent bears, used to striking off on their own, might be unable to tolerate such a stifling organizational scheme. On the other hand, sentient bees might feel comfortable with a monolithic interstellar imperium we would find oppressive.

Psychologists know that humans are prone to accept a group verdict or an authoritative version of the facts, even when contrary to the plain and immediate evidence of the senses. Political scientist Robert G. Wesson, of the University of California at Berkeley, notes that the elaborate structure, multiplicity of functions, and size of imperial apparatus would make an empire appear awesome, even magical, in its workings. This plays on human psychology, says Wesson, an expert on empires, because individuals, unable to judge for themselves, are compelled "to take the general view and to seek confirmation in consensus. Complexity demands special knowledge and professionalization, and gives the experts the right to decide. The idea that the wise should govern appeals to ordinary men as much as to Plato, and there is little need or means of questioning the wisdom of the far-off men whose rightness is sealed by power."

A still larger concept in the psychology of empire is heritage. This is the sum of biological, ecological, experiential, cultural, and historical commonality among the subjects of political organization. The more members have in common, the more likely they are to agree. Common heritage thus promotes cohesion in empire; diverse heritage tends to destroy it.

Biology is the most fundamental heritage shared by groups of lifeforms. Political systems comprised of sentient beings of a single species have a better chance of sticking together than aggregations of foreign species. Political union among races inhabiting wholly different biochemical or thermal regimes, or

M 101, a spiral galaxy in Ursa Major. Much like the Milky Way Galaxy in appearance, the structure of arms and core stand out clearly, though the halo cannot be detected.

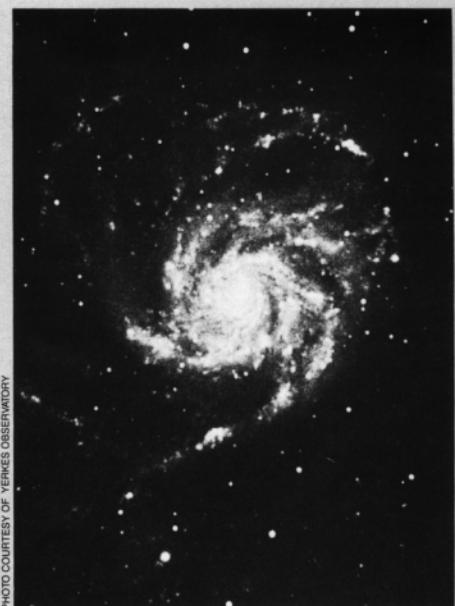


PHOTO COURTESY OF YERKES OBSERVATORY

NGC 4565, a spiral galaxy in Coma Berenices, is seen edge-on in this Mt. Wilson photograph. Were this our own Milky Way Galaxy, a 100 light-year wide stellar empire in comparison would be smaller than the period at the end of this sentence.



PHOTO COURTESY OF YERKES OBSERVATORY

If imperial warships fly just a thousand times lightspeed, it's just 37 hours from Earth to Proxima Centauri. . .

between natural and synthetic lifeforms, is unlikely. An empire comprised mostly of colonists of a single originating species is more likely to survive than a polypsies dominion of literally millions of different races.

How Far, How Fast?

How far-flung is the empire, and how fast can it respond to a challenge to imperial authority? Dispersion restricts the government's ability to grow, communicate with its subjects, or transport the means of control. Most physicists believe that no material object can be accelerated to the speed of light. Some say that unless an expanding civilization find some way through or around this barrier, the iron grip of empire cannot be maintained.

If both communications and travel are lightspeed or slower, then it's decades of travel just between stars, tens of millennia from the Galactic Palace out to the revolt at the periphery. Given these circumstances, writers conclude that empire is all but impossible. With sub-light speeds, claims SF writer/editor Ben Bova, "we'll be in the Marco Polo stage of interstellar contact: adventure, strange tales and artifacts. But no lasting political relations — for better or worse — with the neighbors. Even the sternest, most fearless general might feel foolish mounting an attack when he knew that he could never see the outcome in his own lifetime."

Political scientist Jerry Pournelle (another SF writer) picks up on the military problem. "Punitive expeditions would be nearly impossible, hideously expensive, and probably futile: You'd be punishing the grandchildren of a generation that seceded from the Empire, or even a planet that put down the traitors after the message went out. Even a rescue mission might never reach a colony in trouble. A coalition of bureaucrats could always collect the funds for such an expedition, sign papers certifying that the ships are on the way, and pocket the money...in sixty years someone might realize what had happened, or not." Poul Anderson must have been

in an unusually skeptical mood when he once declared that "even a hyperdrive cannot lead to a galactic imperium."

Of course, time delays are inherent in all real physical systems, a problem exacerbated by the tremendous lag times in transportation and communication between the stars. As aerospace engineer Conley Powell has pointed out, if the coronation of the first Pharaoh had been announced to the Galaxy by radio, the word would now be only about 1/15th of the way to the far rim.

But all these arguments against empire fall flat. Even a completely slower-than-light galactic government could position outposts and supply depots near key population centers. These could dispatch warships or supplies fairly quickly by command, or under color of local appointed authority. This is how imperial Rome stifled revolt — a strong military governor backed by several legions. Only the loyalty of the outpost to the Emperor need be maintained.

It's hard to imagine a more effective deterrent to potential anti-imperial elements than a threat of retribution against ancestors ("a curse on all your heirs"). Why waste time and energy fomenting revolution if your grandchildren will live to hate you for it, and whatever you accomplish will be undone anyway? As for corruption, supercomputer-bureaucrats don't need money, will be programmed to execute the Emperor's bidding, and will be intelligent enough to recognize and report any attempted tampering with the system. Human bureaucrats would need medically- or biologically-extended life-spans and might think twice about jeopardizing a millennial civil service career for a mere 60 years of luxury.

Generals who live 2,000 years could easily justify launching an attack that would not be consummated for several hundred years. Remember the Hundred Years' War between England and France in the 14th century? And if the starships have energy to fly close enough to lightspeed, shipboard time slows due to Einstein's Relativity and the military leader and his troops age only a decade

during their tricentennial campaign.

Much as radio, television, and air travel caused Earth to "shrink" during the 20th century, the galaxy effectively contracts as travel speeds approach, later possibly exceed, lightspeed. With faster-than-light transport or communication, empires become as plausible as they are on Earth. If imperial warships fly just a thousand times lightspeed, it's just 37 hours from Earth to Proxima Centauri (the nearest star beyond the Sun) and only one year to traverse a 1,000-light-year-diameter Empire. That's a response time even Imperial British naval commanders of old would have envied.

Numbing Complexity

Arthur C. Clark insists that large galactic governments are impossible because of their intolerable complexity. This is based on a simple truth: As population grows arithmetically, the number of possible interactions rises geometrically. Communication and control thus become more and more difficult with increasing size. Consider the example of the Galactic Democratic Federation Model.

Planetologists estimate there may be hundreds of millions of habitable planets in the Galaxy. But let us imagine a government responsible for only 1,000 member worlds, each with 10 billion citizens. The Federation operates under the U.S. Constitution. In the Galactic Congress, as in America, each Representative speaks for 500,000 citizens, so there are 20,000,000 Congresscreatures instead of the present 535. With 100 research and support staffers each, the population of Capitol Planet rises to 2 billion. One wonders what kind of global sub-government would be needed at the Capitol to restrain a whole planetful of aggressive, devious, unruly politician-lawyers.

But all such attempts to showcase the "numbing complexity" of galactic government are unconvincing because information flows in interstellar empires needn't be all that serious, though we'll obviously need computer-bureaucrats to handle most of the red tape. Imperial leaders don't need to review a member society's paperwork — just the significant parts.

Information is measured in bits, where one bit is roughly the amount of information contained in the answer to a simple yes/no question. A few billion inhabited worlds, each generating 10^{13} bits per year (estimated current humanity), make a total data flow only 10^{15} bits/

second for the palace computers. That's only a thousand times more than the Massively Parallel Processor, currently under development for NASA, can handle. The Empire is vast, but its computers are faster.

In about A.D. 300, the Roman Empire became too large to administer and voluntarily fissioned into two parts, East and West — and this was the beginning of the end. But with computers to help out, much larger empires should be manageable. Since silicon microcircuits can theoretically process ten billion times more data than human neurons, pound for pound and bit for bit, then maybe with computer help humans could run empires ten billion times larger than the historical imperial scale. The pre-computer Roman and British Empires ruled 30 million and 300 million people, respectively, before becoming too large. Perhaps a galactic empire using electronic administrators could handle 10^{10} people before it got too cumbersome. That's a billion planets with ten billion inhabitants each!

Political scientists are aware of a link between size and leadership. According to Mosca's Rule: "The larger the political community, the smaller will be the proportion of the governing minority to the governed majority." Roberto Michels' "Iron Law of Oligarchy" goes still farther, asserting that growing political systems, especially empires, invariably evolve into more oligarchic (rule by a few) forms of government. So while democratic or republic empires are possible, as they grow they will slowly but implacably drift toward autocracy.

In a living system, doubling the linear dimension of an organism quadruples surface areas and octuples volumes; this is called the Square-Cube Law. Since lung, alimentary, brain and other tissues service eight-fold increased volumes, but organ inputs pass through four-fold-increased surfaces, organ surfaces in larger animals must become at least twice as convoluted just to break even.

It appears that the Square-Cube Law affects social systems too. Years ago, researchers noticed that the number of components of an organization handling external relations increases as the two-thirds power of the number for internal relations. This shows that organizations are growth-limited by the sheer difficulty in getting communications from their "surface" (where they contact their environment) to scattered internal decisionmakers. The surface of a body increases as the two-thirds power of its volume, so the analogy is compelling.

Galactic Tax-farmers

Throughout Earth history, writes historian Robert G. Wesson, imperial economies have been made anemic by continuous bleeding — "ruinous taxation is probably universal." Often the chief, sometimes almost the entire, business of administration is taxation, which is then assigned to concessionaires or professional collectors, sometimes known appropriately as "tax farmers." Will the emperor of the Galaxy succumb to the same, seemingly inevitable temptations? Solar systems are not very mobile; it will prove difficult to hide from the Imperial Taxcreature when it comes calling to collect its due. What manner of tribute might be demanded?

The two most fundamental needs of the Empire are energy and information. Thus the Imperium might levy taxes in watt-seconds of energy per year on each solar system. Cargo ships carrying hydrogen fusion fuel to Empire depots at 13% lightspeed or less, or antimatter conveyed below 87% lightspeed, deliver more energy than consumed for transport. Exotic but useful elements such as lithium, beryllium, boron, rare earths, and platinum group metals might also be sufficiently valuable bounty. Slaves and other black market goods for the Emperor's amusement are less likely. Information is an important commodity. Subject star systems may be required to transmit copies of all new technical knowledge generated each year to update the *Handbook of Galactic Engineering*, or to provide data processing or data storage facilities for Imperial use.

Or the Emperor may command each member stellar civilization to raise a glorious edifice in his honor: a Brobdingnagian castle in space, in case His Majesty should ever come calling. Freeman Dyson calculates that the largest rigid space structure that can be constructed using known materials, at the Earth's distance from the Sun, is about a million kilometers in diameter. (Larger objects are destroyed by gravitational tides raised in them by the sun.) A star palace of this size would have the volume of 500,000 Earths, yet only a billionth or less of Earth's mass. The Palace could house millions of bureaucrats, computers, and garrison troops, and would be visible from anywhere in the solar system — a shining watchful reminder of imperial might.



According to Kenneth Boulding, Director of the Institute of Behavioral Science at the University of Colorado, as a system grows larger it becomes impossible for it to retain the original communication and control structure intact. Then, he says, "increasing size is possible only at the cost of increasing complexity of structure."

One trick to allow increased size is specialization — the division of labor in society being one example. Investigators find that the number of occupational positions increases roughly as the logarithm of system size. Large size plus the Square-Cube Law determine the mix of specializations — probably favoring the Imperial propagandists. Says John D. Kasarda at the University of Chicago Center for Urban Studies, "the major role of holding large social systems together rests with those whose primary function is facilitating communication."

Minions Aplenty

Specialization leads to hierarchy and span of control. Hierarchy means levels of increasing managerial specialization, each level having supervisors of equal responsibility. Span of control is the number of subordinates administered by each supervisor.

Studies of governmental and private organizations show that the number of hierarchical levels and the span of control tend to increase as the whole system expands, but also that the two are complementary. For a given size, a wider span of control means fewer levels are needed above and below each span, producing a broad "flat" organizational pyramid. More levels means small spans suffice, giving a narrow "tall" organization with tighter control from the top. Humans seem naturally

to prefer rather tall organizations, perhaps partly due to our simian heritage of vertical troupe dominance chains. Sentient extraterrestrials evolved from carnivorous cats or intelligent octopi, solitary creatures by nature, would favor flatter organizational structures.

Managing a galactic empire will be a tremendous challenge. Due to the extreme system size, the number of levels and broad spans must be enormous. The best human organizations have spans of 5 subordinates per supervisor. Using this figure, a galactic empire controlling ten billion planets having ten billion inhabitants each would require at least 21 hierarchical levels. It is well-known that human organizations with more than 6-8 levels become excessively bureaucratic. You thought the U.N. was bad? . . .

The Imperial Compu-crats will be running the show day-to-day, but living beings (we hope) will still be making the hard policy-level decisions. If we optimistically assume that a control span of 100 subordinates can be achieved for, say, human policymakers, then the number of hierarchical levels can almost be halved — from 21 down to 11. The structure of Sir Roger's bustling empire might then look something like Figure 1.

Even with all his mechanized assistants, the Emperor will have absolutely no contact with non-interstellar personnel. His relations with his magistrates would be not unlike those between the United States President and the mayors and city managers of American cities. To the Galactic Emperor, the starkeepers, each responsible for 100 worlds, will seem much. U.S. citizens appear to their President — with only a very rare audience being granted. Planetary governors are "the rabble."

Organizational specialists studying "control loss theory" say that in tall, human-like galactic organizations, memos would have to travel down through so many channels that most orders from top to bottom levels could be almost totally degraded to noise by the time they arrived. Economist Oliver Williamson devised a simple model to predict how goals generated at the top of a hierarchy are implemented at the bottom after passing down a number of levels in the chain of command.

If each message, on average, passes through a level 95% intact, then Williamson would claim that since orders must change hands 10 times, Sir Roger's Empire is (.95)¹⁰ = 60% effective in carrying out its aims. At 85% per level (Williamson's lower limit based on studies of actual human organizations), effectiveness drops to 20% and only one-fifth of the Emperor's plans for the commoners ever reach fruition.

Peter B. Evans uses Williamson's control loss model to show that higher efficiencies are possible when the Emperor switches to a "multiple hierarchy" system, such as the dual hierarchy. If the Emperor creates a complete second command hierarchy in parallel with the first, his effectiveness rises by nearly two-thirds. The superiority of dual hierarchies is well-known in business (line-and-staff) and in public administration (especially Communist bureaucracies). Lattice structure systems are a more sophisticated form, involving a complex lattice of hierarchical links providing a startling multiplicity of pathways to the top. Such novel systems may not encourage galactic stability, but the opportunities for palace intrigue are legion!

Interstellar Commerce

Given that the Empire is properly administered, what about its trade and industry? The common wisdom is that not even gold, diamonds, radium ingots or complex microelectronic devices would be worth their weight in trade between the stars. This is probably dead wrong. Civilizations inhabiting different star systems should be able to trade in bulk goods for comparatively little cost.

Near-lightspeed rocket ships are fine for people in a real hurry but very wasteful for galactic commerce. Most of the rocket's energy is expended to make sure the trip is completed within a single crewman's lifetime. This is an unreasonable restraint on advanced solar civilizations who employ automated crewless stellar cargo vessels.

One of the best proposals for interstel-

Figure 1.

SIR ROGER'S GALACTIC EMPIRE

(Span of Control ≤ 100 , Hierarchical Levels ≤ 11)

Ordinal Level	Person Imperial Office or Rank	Number of Holding Rank	Number of Planets Controlled	Subjects Controlled
1	Emperor	1	10^{10}	10^{10}
2	Cabinet Minister	100	10^8	10^{18}
3	Peer	10,000	10^6	10^{26}
4	Royal Magistrate	10^4	10,000	10^{14}
5	Starkeeper	10^3	100	10^{12}
6	Planetary Governor	10^{10}	1	10^{10}
7	Continental Regent	10^{12}		10^8
8	Knight	10^{14}		10^6
9	Burgess	10^{16}		10,000
10	Gentry	10^{18}		100
11	Commoners	10^{20}		1

... A galactic empire would require at least 21 hierarchical levels [of management] . . . You thought the U.N. was bad?

lar commerce is the Interstellar Railgun, first advanced by Freeman Dyson. An advanced civilization, says Dyson, should be able to devise techniques to recapture most of the kinetic energy (the energy of motion) of an automated cargo ship shot from an electromagnetic cannon light-years away. Dyson envisions a huge superconducting electromagnetic mass-driver apparatus, able to swallow and regurgitate whole starships in its gaping maw. As a vessel enters a column of huge coils, energy is drawn from the ship magnetically and stored. The carrier decelerates to a halt, docks, and its precious freight is unloaded. Later, properly serviced and reloaded with fresh goods, the projectile is thrust back into the breach of the colossal space cannon and hurled down the barrel by magnetical forces, the muzzle aimed at the vessel's next destination.

Ignoring initial capital outlays and maintenance charges, the major cost is the value of any new energy which must be supplied by the receiving station due to minor losses in the circuitry. If we assume 95% energy recovery efficiency, a cruising velocity of 1% lightspeed, and current energy prices per kilowatt-hour, transport expenses fall to about \$1,000/kilogram. That's like going into orbit aboard America's Space Shuttle — but we're talking interstellar, not just orbital, transport here. Even with no energy recovery the price is only \$25,000/kg. And it is likely that space-based solar energy will cost a lot, lot less than it does now.

The mere existence of a stellar civilization implies the ability to harvest and utilize the entire material resources of a solar system. Such a society must be able to disassemble and move planet-sized masses across at least interplanetary distances. The energy required to explode the Earth into tiny rocky fragments is 10^{30} watt-years. To deorbit the Earth into the Sun, or to impart sufficient velocity for Earth to escape the Solar System altogether, requires 10^{38} watt-years. A stellar civilization (10^{38} watt-years per year) that devotes only ten percent of its energy to large-scale

mining and construction operations (as humanity does) can pulverize whole worlds in a year and relocate planetary masses in a decade or less.

The machines which the Empire will command to perform these herculean labors will be fully automatic robot systems. These machines will run themselves, repair themselves, possibly defend themselves, and even reproduce themselves to produce more robots as needed — all at the Emperor's behest.

Recent studies by NASA have shown that complex space factories capable of partial or complete self-replication are feasible using foreseeable human technology just a few decades from today. One immediate benefit of self-reproducing automata is that they provide a means for organizing vast quantities of matter into an ever-widening habitat for humankind throughout the Solar System. The most sophisticated will serve as "general product factories" programmed to manufacture anything which is physically possible to make, from statues to starships, much like computers can be programmed to calculate anything it is possible to compute.

This technology will provide such a large amplification of man's matter-manipulating ability that it is possible even to consider the "terraforming" of Mars, Venus and other worlds, remaking whole worlds as we see fit, for human habitation or otherwise. During terraforming the machines can be ordered to excavate specific patterns which later may be used for artificial seas, lakes, canals, roadways, and subterranean agricultural greenhouses or cities. Then general product factories build the cities automatically, making a fully industrialized planet. Ultimately, voracious replicating machines could be commanded to digest whole worlds, converting their substance into factory machines, space habitats, interstellar arks and railguns, or customized "designer planets" for the Emperor's favorite concubine.

Trade routes are usually the shortest possible path, in time or distance, between the sources and consumers of commodities. Transport technology fixes

the optimum interstellar routes.

Railguns allow line-of-sight routes. Just aim and shoot, leading the target, but take care — the galactic escape velocity is only 0.2% lightspeed, so if you miss at 1% lightspeed kiss your cargo goodbye. Projectiles fired just under 0.2% lightspeed can enter galactic orbits, carrying them safely out and around the Core to the opposite side.

Ramscoop starships, which scoop up interstellar hydrogen for fuel along the direction of travel, are a different matter. For them, intragalactic trade routes lie along the regions of greatest gas concentration in the spiral arms, so vessels must use what network theorists call "ring routes." Ring routes follow clockwise or counterclockwise arcs around an internal circumference of the Galaxy (e.g., a spiral arm), then move radially inward to the final destination. Ramships on ring routes travel a little farther compared to line-of-sight, but their funnels pick up ten times more fuel so they arrive in much less time.

Small pockets of economic activity may be scattered throughout the galaxy. For instance, stellar civilizations located in galactic clusters of 10-1,000 stars, only 5-50 light-years in diameter, may form close-knit economic units. Their solar systems would typically be only half a light-year apart, ten times closer than normal Disk stars (such as our Sun). The average distance between known clusters is 100-300 light-years, so interstellar trade routes may be laid out in overlapping arcs connecting galactic cluster trade associations along each spiral arm. Globular clusters, relatively metal-poor and probably also planet- and life-poor, have rich lodes of fusionable hydrogen, a lucrative mining venture for industrious galactic entrepreneurs.

Star cultures will be incredibly powerful societies. They will have cheap interstellar travel and exuberant economic activity among themselves. So travel, trade, mining, colonization, tourism, diplomacy, government — even warfare — are possible between the stars. The timescale of events may be long by present human standards, but sentient alien creatures with millennial or meganatural lifespans may regard a century of our time as the subjective equivalent of months or hours.

Interstellar War

Two societies must have some conflict of interest to make war. Interstellar economic growth may provoke such a conflict. Industrial expansion requires mass

and energy, yet the galaxy is mostly vacuum. We can imagine an intense competition among solar civilizations for the relatively scarce natural resources of our galaxy, with great battles for possession of star systems using fearsome warships capable of planetary sterilization or disassembly.

Of course, competition doesn't always lead to wanton aggression. Instead of fighting, alien races may "scramble," nonaggressively "getting there first" rather than destroying all competitors. Advanced sentient species may decide not to compete directly, agreeing to confine their activities to special regions of the Milky Way, or to specific classes of stars. Cooperation is possible, with two or more races pooling their resources and specializing. Along this path lies the peace of federation and orderly empire.

Sociobiologist Edward O. Wilson of Harvard University points out that man is among the most pacific of all of Earth's animal species. In general, says Wilson, human beings have fewer aggressive, violent encounters than most other lifeforms on this planet. Perhaps this means that high intelligence promotes pacifism, or that peacefulness is necessary to develop high intellect and civilization. Over the last few thousand years, human wars have become fewer but more severe as warring societies have grown in power. Perhaps the end result will be a starfaring humanity which experiences war as an extremely rare, but near-catastrophic, event.

Because of the many eons required for evolution, intelligent species may arise millions of years apart in time. Expanding interstellar empires will be more powerful than any non-expanding cultures they encounter. Contact is likely to be between unequal, conflict short-lived. A few hundred years difference in technological development could be decisive. "The fate of weaker civilizations," warns Michael Michaud, "may depend not on their bravery or their science and technology, but on the ethics of the stronger."

Star wars will be fought between civilizations having roughly equivalent technological prowess. Then "star admirals" might deploy fleets of battlecruisers, manipulating them in three dimensions," Michaud speculates. "Rival powers might negotiate borders and no-creature-lands in space and alliances might be formed against expansive powers."

A more probable event is a single species, and its genetic offshoots, fighting among themselves. Studies by Carl Sagan and others show that with a wide

range of reasonable technological assumptions, the entire Galaxy can be colonized by a single species in 1-10 million years, a mere eyelid of cosmic time — even if the colonists can only travel at 1% lightspeed. Civil wars may be fought between Imperial storm-troopers and colonist-rebels trying to secede or to establish an empire of their own.

Physics and engineering are no barrier to galactic conflict. For one thing, star cultures will find interstellar travel extraordinarily cheap. Consider: If the Starship Enterprise (190,000 metric tons) of *Star Trek* TV show fame had no warp drive and had to plod along at sublight speeds, then a visit to a star system 100 light-years away requires 10^{12} watt-seconds of energy if a constant acceleration of one Earth-gravity is maintained throughout the journey, with mid-course turnaround. (The Enterprise flies for 160 years, Empire Time, though only nine years elapse for the ship's crew because of relativity.) The energy for this mission could be supplied by only *ten seconds* worth of the output of a stellar civilization. That's a technological feat equivalent to the launching of a few Saturn V rockets by present-day humanity. No big deal.

Once it arrives, the warship alone can inflict a fair amount of damage. If 10% of its mass is antimatter for energizing weaponry, more than 10^{14} watt-seconds can be visited upon the unfortunate infidels. This is enough energy to (1) vaporize the top few meters of Earth's entire surface, (2) excavate a giant crater 100 kilometers wide and 50 kilometers deep, or (3) slice Earth like a grapefruit, clean in two along the equator, by burrowing a trench a couple of meters wide clear through.

To get really big interstellar force projection, though, the Enterprise won't do. You need the Death Star. To pulverize an Earth-sized world into dust with a single hammerblow takes the energy in a few trillion tons of antimatter. To inventory ten such shots, and have the weaponry weigh only one-third the total ship mass, the Death Star must be the size of a large asteroid and weigh 10^{17} kg. George Lucas has his sizes figured right. However, the energy to propel the Death Star to 1% lightspeed is just under 10^{20} watt-seconds. This is an equivalent exercise for a stellar civilization as the several hundred Space Shuttle launches planned over the next two decades are for us. Pretty expensive force projection, but an Empire of solar civilizations could easily foot the bill.

Possibly the most effective tactical weapon would be a series of small, high-energy automated ramscoop projectiles. These would be aimed and launched at the offending star system, timed to appear just after the Enterprise arrives. If in the judgement of the starship commander the situation is resolved to the emperor's satisfaction, the accelerating drones are redirected away to some other target or are ordered to self-destruct. If the rebels prove intransigent, the commander backs off and allows the physics of hypervelocity collision to take its natural course. Without deceleration at midpoint, a 1-megaton drone accelerating constantly at one Earth-gravity for 100 light-years would be traveling at 99.99% lightspeed upon arrival. Its raw energy of motion is 10^{19} watt-seconds, enough to blast Earth's entire crust to the heavens. Indeed, the Empire could maintain a standing fleet of "Damocles Drones" in forced galactic orbits which could be ordered down on fairly short notice.

When We Grow Up

An alien Empire may be lurking out there, somewhere, waiting for us to mature. They may be wise and tolerant, respectful of all life, and cautious in their dealings with new intelligences. Or they may be arrogant and brutal, wasteful and despoiling the natural beauty and bounty of the cosmos, squashing all potential rivals for galactic dominance.

Star wars, though possible, are ultimately self-destructive, and probably entered only reluctantly and rarely by truly intelligent races. Responsible societies will take great pains to restrict and control internal fringe elements who might prey on others. Ultimately, however, we must take responsibility for our own survival. If humanity has time to forge a dynamic, powerful spacefaring culture in the Solar System, then maybe, just maybe, we shall be deemed worthy of membership in the family of galactic civilizations in the stars.

And should it turn out that we are the only surviving technological species anywhere in the Galaxy, or that we are the first, then our responsibility to posterity is so much the greater. For all who follow us must know of our triumphs and follies, our miserable mistakes and towering achievements, and will learn why it was that humanity deserved to rule the galaxy — or why we did not, and became extinct. ▲

Crimes, Crazies, and Creole Cookery

*As flies to wanton boys,
are we to the gods;
They kill us for their sport.*
Hamlet, Act IV

by Dr. Robert A. Freitas Jr.

Consider a family having a picnic in a park. The blanket is spread in a large, open clearing and the food unpacked. Ants begin to appear, innocently searching for nourishment. One of the children tracks them down to their anthill, pours a pint of kerosene down the hole and ignites it. The insects are destroyed. The picnic continues uninterrupted.

Thus may a very small segment of human civilization totally eradicate an entire ant society uncaringly and with ease. The anthill has a power consumption of just under 1 watt, compared to the 10^{11} watts controlled by human society. This is exactly the same differential which would exist between all of mankind and a 10^{36} -watt solar civilization. What if we are just pesky ants to them?

Assuming we're fortunate enough to encounter a star culture which reveres all forms of living consciousness (cosmic vegetarians), we still may be in very grave danger. Much as a small child carelessly exterminates an entire insect society, any malevolent subgroup of the principal stellar civilization could represent an equally lethal threat to us.

In the United States today, about 5% of all citizens have criminal records and 0.01% of us are killed each year as victims of homicide. A conservative estimate might give 0.1% as the number of Americans capable of senseless violence or who are direct or indirect participants in organized crime (remember: humans are among the most pacific of all animals). Let us assume that advanced alien societies hold social deviance to a mere 0.0001% of the general population, roughly the number of people struck by lightning each year on Earth. In this case a Galactic Mafia could command as much as one millionth of the total resources of the parent society, or 10^{20} watts. This is enough power to launch numerous interstellar sorties and to sterilize many Earths annually.

Star cultures may well have a heterogeneous character much like human-kind on this planet. Every fanatical religious sect, ideological or socioeconomic subculture, cultist clique and secret-handshake fraternity may be able to manipulate technologies and energies

vastly superior to the best mankind can muster. Interstellar People's Temples (remember Jonestown?) or galactic Man-on cultists could threaten our very existence unless their attitudes toward our species are absolutely benign. To return to the analogy of the picnic in the park: Members of a few religious sects such as the Jains of India carefully avoid stepping on ants for fear of extinguishing a life, but many humans gleefully pursue and squash insects just for sport.

Another very real possibility is that aliens may come here "to serve Man." It is not inconceivable that extraterrestrial gourmets might regard us — properly prepared to eliminate any poisons, microbes, or unpleasant aftertaste — as food. To fantastically advanced intellects, our much-vaunted human consciousness may seem no more an advance in intelligence than emotionality in mammals seems in comparison to the evolution of the entire vertebrate line. To them our technology may appear instinctual much as we regard the hive building of bees and the mound-architecture of termites.

And it's not uneconomical to ship human cattle across interstellar distances. With freight charges as low as \$1,000/kg, chances are good that the Galactic Delicatessen will be well-stocked with rare spices and exotic beverages, meats and other foods from many worlds. After all, we pay \$500/kg for Russian caviar, \$700/kg for Italian white truffles, \$1,700/kg for Mediterranean saffron and \$5,000/kg for Chateau Lafite Rothschild 1846. Why shouldn't wealthy interstellar connoisseurs be willing to fork over \$1,000/kg for genuine hairless primate meat, imported fresh from Earth? (The argument that it is far cheaper to transmit a few bits of DNA-data by radio than to transport a few tons of top sirloin by star-ship is true but irrelevant because it ignores the issue of *value*: the *original* is always worth more than the *copy*.)

Each year Americans spend a few percent of the national wealth on luxury foods, alcohol, sex, cosmetics, gambling, and a wide assortment of other hedonistic corruptions. A few percent of the resources of a powerful 10^{36} -watt star

culture could buy an awful lot of vice, even by libertine human standards. The temptations and opportunities for cheating, profiteering, piracy and black marketeering become more obvious once we consider the commodities likely to be valuable enough to be traded in interstellar commerce: Precious metals (\$15,000/kg for gold), advanced computers (\$100,000/kg for the Cray I), rare plants and animals (\$106,000/kg for an *Odontoglossum crispum* orchid), drugs (\$350,000/kg for heroin), fine art (\$100,000,000/kg for the Mona Lisa), and flawless gemstones (\$250,000,000/kg for diamonds). Transportation costs for each of these kinds of items are minimal compared to the value of the cargo, and all may be found on Earth. Will mankind get ripped off, our lush world ruthlessly stripped of its wealth?

The Galactic Mafia may choose to barter human lives, vending a few of us as pets or performers. In the current international "white slave" market, choice selections auction at about \$2,000/kg, roughly the price in 1980 dollars of pre-Civil War slaves. At this price, says Ben Bova, "the girls would have to be damned good to be worth the freight charges." Better catches are prize athletes and actors, who regularly fetch more than \$100,000/kg in open bidding on their multi-year contracts. Although there is some room for argument, the expense of interstellar travel will not be the controlling factor. If they want us, they'll take us.

Finally, what about our scientific value? Developed societies typically spend a few percent of their GNP on research and development. For a stellar society, that's 10^{10} watts, enough to send out 100,000 research starships per year full of nosy interstellar zoologists, social scientists, and cultural technicians. We may be treated as on-site laboratory test animals.

Clearly, the threat of interstellar war is the least of our worries. Mankind in its present underindustrialized condition all too easily could fall prey to hordes of interstellar carpetbaggers, Galactic Mafiosi, star cultists, alien gourmets, and BEM-thropologists.





QUEST

by Poul Anderson

A chapter from *The Annals of Chivalry* by Sir Thomas Hamedward writing in his old age, this knight baron intended to continue Friar Parvus' artless chronicle of *The High Crusade*, in a style more elevated. Deriving as it does from medieval romances, the style is better described as more florid, while the account is autobiographical rather than historical. Nevertheless, if nothing else, the book is of some interest as depicting later stages of interaction between long-established starfaring societies and those humans who, carried out into the galaxy against their will, overcame their would-be-enslavers and founded the English Empire.

As nearly as the astrologers could calculate it from what scanty data were in the records, lost Terra had celebrated thirty Easters, and the year of Our Lord was 1375, when King Roger summoned a Grand Council to his seat of Troyno-vaunt. His purpose therein was three-fold. Imprimis, he would have all of us

join him in offering solemn thanks to Almighty God for His many mercies and blessings. Secundus, he would renew old acquaintances and strengthen bonds of fellowship through worldly festivities, as well as get to know the grown children of his followers in desperate adventure, these three decades agone. Tertius, he

would discuss present challenges and future endeavors with his lords, his knights, and such of his ladies as nowadays held fiefs of their own among the worlds.

From star after star they came, across as much as a hundred light-years, in



spaceships emblazoned with their arms and achievements, themselves in splendor of embroideries, velvets, silks, and furs. Banners flew, trumpets and drums resounded, horses and steeds of unearthly stocks pranced proud, as they debarked at the Port Royal and rode in beneath high walls and gleaming battlements to the palace. Yet ever borne in a place of honor were the weapons they had first brought from England. These were less often sword or lance than yeoman's bow, sergeant's ax, or serf's billhook. Remember, O reader, the original company had not been large, even reckoning in the civilians — men, women, children, clerics — who joined Sir Roger de Tourneville's free companions. Perforce, nearly everyone who survived the Crusade was eventually ennobled and put in charge of some portion of their conquests. At that, more than half the great folk now arriving were nonhumans of one sort or another, who had accepted the True Faith and paid homage to our puissant sovereign.

Besides this reminder of our origins, the necessity of caution was wholesomely chastening. We had broken the cruel imperium of the Wersgorix, made them subject to us, and thereby earned the gratitude of those other races whom they had decimated and oppressed. Certain of our former enemies had become our friends and, indeed, risen high among us because of their quick intelligence and technical erudition. However, more of them remained sullenly hostile. Some had attempted revolt. Many had fled beyond our ken, to skulk in a wilderness of uncharted suns. They still commanded terrible powers. A single nuclear warhead would demolish this city and abolish both monarchy and Papacy. We English were as yet thinly spread. Without the leadership and resources at Troyanova, our hegemony would be all too vulnerable to attack from without and within. Were it overthrown, that would spell the doom of Christendom, and belike of Adam's seed, among the stars. Therefore warcraft patrolled the Angevin System and virtually englobed Planet Winchester. No vessel might come near before it had been boarded and thoroughly inspected.

Nonetheless, the mood was joyous, the behavior often riotous, as English met English again, here at the heart of their

triumphs. I own to downing more Jair liquor than was wise.

The carpenters at work in my head next morning may perhaps excuse my feelings at Mass. This I attended with my master, Sir Eric de Tourneville, youngest son of the King, whose squire I had lately become. Churches were so crowded that he sought a palace chapel; and the priest, Father Marcus of Uralura, preached a sermon that bade fair to last until Judgment. As I write, his words arise from the past and once more drone on within me.

"Praise God in sooth, and wonder at His foresightful care for us. The very fact that we are sundered from Terra exemplifies this. Only consider. A Wersgor scout vessel, seeking fresh territory for its people to overrun, landed at Anshy village with terror and slaughter. Hardy men counterattacked and seized it. Thereupon they sought to use it to end the French war and liberate the Holy Land; but they were tricked into a long voyage hither, where they must fight for survival. By divine grace, as well as valor and cunning, they prevailed. In the original turmoil, navigational notes were lost. The stars are so many, each planet of theirs so vast and preoccupying, that no explorer has found a way back to the mother world. But do not join those who lament the failure. Reflect, instead, that thereby Rome and Jerusalem have been spared possible destruction in space warfare. Meanwhile, the exiles were *forced* to bring Christian teaching and English rule to the benighted heathen. Enormous have been the rewards, secular as well as spiritual, albeit the latter are all that have any real importance —"

I have written down this part of the homily as a belated penance for having, about then, fallen asleep. Otherwise I was afame with eagerness. My master had confided to me something of the endeavor which he would propose.

Being a son of John the Red, Count of New Lincolnshire and Baron of Pthing'gung, and being the squire of Sir Eric, a prince of the blood through not destined for the throne, I was present when the Grand Council met. Like my counterparts, I was kept so busy dashing to and fro with refreshments that I had little chance to observe. Recollection blurs

into a brightness of sunlight striking through stained glass at tapestries, mounted weapons and trophies, rich garments, jewelry of gold and precious stones; a rumble of voices, now and then a shout or guffaw, while an orchestra twiddles unheard in a balcony; odors of meat, wine, ale, incense, humanity thickening the air; hounds and daggers getting underfoot as they snatch at bones thrown down to them; gray hair, heavy bodies, faces scarred and furrowed, with youth here and there along the tables to relieve this dignity; in the Griffin Seat, King Roger, his own olden blade naked on his lap, emblem of power and of the fidelity that he has pledged to his people.

But I remember Sir Eric's words, when the microphone came to him in order of precedence, for they struck that assemblage mute with wonder. Those words are on record, as is the debate that followed. I will only set down the gist of them. He stood, hawk-featured, bronze-locked, his frame lean and medium-tall — a young man, quite newly knighted, though he had wandered and fought widely — and cried forth:

"Your Highness, my lords and ladies, I've an undertaking for us, and what an undertaking! Not another punitive expedition against Wersgor holdouts, not another random search for Terra, but the quest for a treasure great and sacred — the object of chivalry since Arthur or before, the outward sign of salvation and vessel of power, that chalice into which at the Last Supper Our Lord and Saviour did pour the wine which became His most precious blood — the Holy Grail!"

Amazement went through the chamber like a gale wind. The King responded first, in that hard practicality which was ever his. "What are you thinking of? Is not the Sangreal back somewhere in England, whither Joseph of Arimathea brought it? I've heard my share of legends about the matter, and meaning no disrespect, some of them are pretty wild. But they agree that none save he who is without sin may ever achieve the Grail — and I know you better than that, my lad. We've more urgent business than a barebrained dash into God knows what."

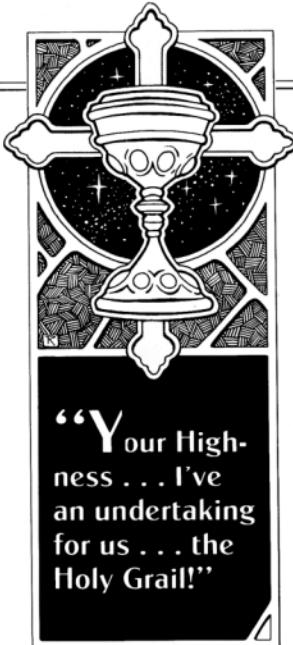
Sir Eric flushed. Once the speech he had composed beforehand was

exhausted, he was no orator. "Well, 'tis like this," he replied. "We . . . er, everybody acknowledges there's a dangerous shortage of saints' relics among us. We've merely those few that got taken along from the abbey at Ansby. And they're nothing much; not even a splinter of the True Cross among them. Superstition is causing people to venerate things that Father Marcus tells me can't possibly be genuine. I hate to imagine what bad luck . . . what Heavenly displeasure that could bring on us. But if we had the actual Holy Grail, now . . ."

Stumbling, he explained. His farings, and a certain innate friendliness and openmindedness, had brought him together with numerous non-humans. Of late they included a former Wersgor space captain named Insalith. He was an obstinate pagan, who attributed all events to the operations of quantum mechanics. However, otherwise he had accepted civilization. His religious blindness made his story the more plausible, in that piety could not have led him into wishful thinking.

Now retired, he had many years before been on several of his race's expeditions prospecting for new worlds to conquer and settle. They had come upon one afar that looked promising. It was untenantanted except for a set of buildings that, in retrospect, resembled a Christian monastery. Landing to investigate afoot, the Wersgor spied a monster, a veritable dragon, but it shunned them and they approached the church. There they met a few beings who, in retrospect, seemed human. Through the open doors they glimpsed something silvery and chalice-like upon an altar, and heard ineffably sweet music. Though the white-robed persons offered them no threat, such awe came upon them that they fled. Afterward, if only for fear of ridicule from their hard-souled colleagues and damage to their careers, they filed a report that tests had shown this planet to be biochemicaly unsuitable for colonization.

Today, having outlived the rest of that crew, having seen our kind enter his realm and erect houses of God, Insalith yearned back. Perhaps yonder was proof of the Gospels that would satisfy his scientific mind and bring him spiritual peace. He was willing to navigate a ship there.



"If we humble mortals could make it into space," argued Sir Eric, "the Holy Grail should have no difficulties. I don't believe we dare neglect this account. It might prove false, I grant you, but then, it might truly be a sign unto us, a command from Heaven." Meanwhile his nostrils twitched. He yearned to be off on such an incredible venture. I had come to know him.

"Aye, go, go, in Jesus' name!" cried Archbishop William, who was himself of Wersgor stock.

King Roger stroked his chin, stared upward at the vaulted ceiling and the battle banners that hung from it, and said slowly, "Remember everything else we've taken counsel about. We can't dispatch a fleet. The risk of our homes getting raided would become much too great. But — well, son, you do have a ship of your own, and . . . and . . ." His voice lifted to a roar. His fist crashed down on the chair arm. "And by our Lady, how I wish I were going along!"

I forebear to describe the tumult that followed, before Sir Eric won leave to depart. Next day, in his exhilaration, he swept like fire through a tournament, unhorsing every opponent until at last

he could ride to accept a wreath from the Queen of Love and Beauty. She was Matilda Mountjoy, of whom even I already had knowledge, and she was on a unicorn. However, the genetic crafts-men who supply animals of this sort have not yet succeeded in giving them the ability to make fine distinctions among ladies.

The *Bonaventura* was of modest size and armament, as nuclear missiles and energy projectors go. Half a dozen men, two nonhumans, and their horses crowded its hull. Luckily, the engine was of the best, weaving us in and out of 4-space at a quasi-velocity which brought us to our goal, far outside mapped regions, in about a month.

Just the same, that proved a wearisome journey. The fault did not lie with my fellow Englishmen. Like me, they were young and cheerful, buoyed rather than oppressed by the sanctity of their mission. Besides the knight and myself, we numbered two men-at-arms, a planetologist, and a pilot-cum-engineer-cum-gunner in case any automaton failed. To pass the time, we practiced combat techniques, gambled, drank, pursued minor arts, and bragged about our feats on various planets and women.

Nor can I accuse Insalith of creating tedium. In appearance he was a typical Wersgor, though age had stooped his squat five-foot frame, made gaunt the short tail, faded the hairless blue skin, wrinkled the snouted face and pointed ears, dulled the yellow eyes. None of these changes were overly conspicuous, and he retained a sharp mind and dry wit. We enjoyed listening to his reminiscences of voyages and deeds, aye, even as an officer in the war against our fathers.

Be it confessed, our chaplain was what often made the traveling dismal. Father Marcus was an Uraluran, converted and ordained, abrim with zeal. He preached, he reproved, he set unreasonable penances, he stared chillingly out of his three huge orbs, he wagged a flexible finger or windmilled all four arms or sent his blobby green countenance through the most hideous contortions as he quacked about what transgressors we were. I write "he" for lack of a better word, the Uralurans being hermaphrodites who reproduce only on



ceremonial occasions. To this very day, because of their modesty, that fact is not widely known off their planet. Marvelous are the works of God. Yet at the time, I could not keep from wishing that He had not chosen to create a species so devoid of human failings.) Besides his seven bony feet of height, the ecclesiastical authority bestowed upon him daunted us.

After all, we were in quest of the Holy Grail. If that truly was the thing we sought, then we could not attain to it if we were wicked. We would fail, and belike perish miserably. On the other hand, if our information had misled us, then we must be sufficiently well-informed on spiritual matters and free of pride to recognize this when we arrived. Else we might fall into some snare of Satan.

Father Marcus had therefore ordered a special program for the library of the ship's computer: every tale of the Grail that anybody could remember, with commentaries upon the accuracy of those memories, as well as a compendium of theology. And he kept shriving us and shriving us.

Sir Eric himself, while not always without merriment, had grown unwontedly pious. I often saw him on his knees in the chapel cabin. To the crucifix he uplifted his cross-hilted blade. It was a Singing Sword, whose haft he had commissioned from an electrician. Lately he had ordered me to insert therein a tape of hymns, that the weapon would chant if brought into action.

Father Marcus had opined that we would be blasphemous to carry firearms, let alone scientific instruments, into the possible Presence. But Insalith had bespoken a dragon. Quite likely, we thought, the forces of Hell had established a watcher, which could not enter the sacred precincts but would seek to deter Christians from doing so. Sir Eric did not mean to go altogether unarmed.

The planet was a white-swirled sapphire circling a golden sun, circled in its turn by two small, silvery moons. Spectroscopy showed the air to be salubrious for us, and an instrumented biochemical probe reported no poisons, but, rather, edible life upon arable soil. There was not so much of that soil, forland con-

sisted simply of islands, a few large, most not. This, though, meant that climate almost everywhere was mild. "If ever the Holy Grail was borne from Terra," exclaimed our captain, "how perfect a new home for it!"

"Ah, but is not your intent to bring it back?" asked Insalith. Somehow, strangely, he seemed alarmed.

"We cannot remove it without permission of its guardians," replied Father Marcus, "but perhaps they will allow folk to make pilgrimage hither."

"That would be a profitable passenger route to have," murmured our pilot.

Horrified at his crassness, the priest gave him five hundred Aves and as many Paternosters to say, but Sir Eric declared that we could not afford the time just yet. He was white-hot with impatience to land.

Insalith identified the island of the shrine, a major one, and instruments did reveal a trio of buildings near a lake at its center. They also confirmed a lack of other habitation, or any trace of native intelligence. Had God reserved this world since the Creation for its present use? A chill went along my spine.

Descending on reverentially throttled gravitics, we set down in a meadow three leagues from our goal. "Piety doubtless requires we approach on foot," Sir Eric said. "Alayne and Robert" — he meant our pilot and planetologist — "shall stay inboard, ready to carry word home should we come to grief . . . if, hm, they can't scramble to our aid."

He himself made a splendid sight as he trod forth into day. The sun turned helmet, chain mail, and shield on his left arm agleam; its radiance caressed fluttering plume and scarlet cloak and a pennon atop the antenna of a radio transceiver secured to his left shoulder. Behind him, I bore the de Bourneville gonfalon and Father Marcus a gilt crucifix. At their backs, the men-at-arms, Samkin Brown and Hobden Tyler, carried ax and pike respectively on either side of withered little Insalith.

Ah, the country was like Eden. Overhead reached a blueness full of wings. The cries and songs of those flying creatures descended through a breeze whose warmth brought odors akin to spice and perfume. Grasslike growth rippled underfoot, intensely green, starred with white flowers. As verdant

and graceful were the trees, which soon grew more dense, until we were walking through a forest. There boughs met above us like a cathedral roof and sunbeams pierced rustling dimness. We had not trouble with underbrush, for we had come upon a trail leading in our direction, broad and hard-packed as if by something ponderous.

Sir Eric broke the hush. "A glorious planet. I hope to Mary we don't get our nobles at feud over whose fief it shall be."

"God have mercy!" wailed Father Marcus. "How can you think such a thing, here of all places?"

"Well, they thought it at the Holy Sepulchre back on Terra, didn't they?" the knight replied. "Yes, and fought it, too. You don't have to fret about Man's fallen state. People like me do."

"Nay, that's my vocation," the cleric protested. "Why did God leave us Uralurans free of the deadly sins, if not to set your wayward race an example?"

Ignorant of theology, Samkin blurted, "What, d'you mean your kind are not fallen? You're, uh, *angels*?"

"No, no, no!" said Father Marcus in haste. "My poor species is all too prone to such temptations as quirling and yosheny; my own confessor has often had to set me a severe penance for golarice."

"An object of veneration in your midst would surely inspire you Christians of every sort to reform yourselves," suggested Insalith. "Isn't it reasonable, in your belief, that your God has been saving the relic for this purpose?"

"I have cogitated on that question," Father Marcus answered. "In the era of the Table Round, none save Galahad the Pure could reach to the Holy Grail. Yet through him it was, for a moment, revealed to that whole company; and earlier, at the first Eucharist, even Judas beheld it. For this imperilled outpost of Christendom, divine policy may conceivably have been further modified. Or it may not have been. We can but go forward, look for ourselves, then pray for illumination." He paused before adding, "One thing does strike me as curious. Salvation is not easily won. Nor should the Grail be, that is its sacrosanct emblem. Whether or not God surrounds it with obstacles, one would expect that the Devil —"

As if on cue, a hoarse bellowing interrupted him. We stopped in our tracks. Terror stabbed me. A stench as of fire and brimstone rolled through the forest air. Around a bend in the path crawled a dragon.

Fifty feet in length it was, from fanged maw to spiked tailtip. Steel-gray scales armored it. The six clawed feet that pulled it along made earth shiver beneath monstrous weight. Smoke gusted from its gullet, within which flames flickered. Straight toward us it moved, and its roars smote our ears with hammerblows.

"It left us alone!" I heard Insalith yammer.

"You were heathens," rapped Sir Eric.

"Quick, call the ship!"

"No. The leaf canopy . . . no way to aim . . . the beams would slay us, too."

"The Beast, Satan's Beast," moaned Father Marcus. He fell to his double-jointed knees and held the crucifix aloft. It trembled like a twig in the wind.

"*Apage, diabole!*"

The dragon paid no attention. Closer it came. I was aware of the men-at-arms, about to bolt in panic, and of myself ready to join them.

"God send the right!" shouted Sir Eric, and plunged to do battle. His sword blazed forth. "St. George for merry England!"

Somehow that restored my heart to me. I ran after him, howling my own defiance, the spearhead atop my standard pole slanted down. After an instant, Samkin and Hobden followed.

Sir Eric was already engaged. His blade flew, struck, slashed, drew foul black blood from the unprotected nose of the firedrake. And the sword sang as it hewed. I heard not Latin but English; not a *Te Deum* but:

"Oh, give me a haunch of ruddy beef,

And nut-brown ale in my pot,

Then a lusty wench with a sturdy arse

To bounce upon my cot —" and realized, dismayed, that I had gotten the wrong tape.

If doomed by my folly, I could at least die like a man. I thrust my weapon down the flaming gape. The crossarm jammed tight and our banner charred. The dragon hiccupped thunderously. Meanwhile our companions were stab-



Our gaze
went to the
altar . . . upon
it sheened a
silver chalice.

bing and chopping away.

The creature hissed like a cataract. It scuttled backward. Incredulous, we saw it twist around a tree and make haste out of our sight.

For a long while, we stared at each other, not quite understanding our deliverance. Strength fled me. I sank to the ground and darkness whirled through my head. When I returned to my senses, I felt the priest shaking me and jubilating, "Rouse, my son, rouse, and give thanks to the Lord God of Hosts!"

We did, in fervor, regardless of smoke-stained garments and sweat-stinking bodies. Gratitude welled up in my bosom, and I mingled my tears with those of two hardened sergeants. How strange, how perturbing in a distant fashion, to see the frown upon Sir Eric's brow.

Well, I thought, whatever the trouble was, it did take his mind off my blunder.

I reckoned myself as brave as most fighting men, and had hunted dangerous animals ere now. Nathless, for a space I trembled, tingled, and tottered. That was less because we had been imperiled than because we had evidently encoun-

tered a thing from Hell. Samkin and Hobden were in like case. Sir Eric, though, remained withdrawn, while Father Marcus was full of exaltation and Insalith trotted eagerly onward.

Steadiness came back to me as we fared; for had we not in fact been victorious, and was that not a wondrous portent? When we arrived, my resolution turned to awe.

We had emerged from the wood into cleared acres of garden and orchard. Foreign to us were yon blossoms, hedge-rows, fruits aglow in mellow afternoon light; or were they? Did they not hint at those roses, apples, hawthorns, and other English beauties whereof our parents spoke so wistfully? The lake blinked and sheened on our right, argent on azure; beyond it lifted a serenety of hills. Before us were the buildings.

They were three in number, arranged around a mosaic courtyard. Their smallness reminded me of that stable where Our Lord was born, the poor cottages that sheltered Him during His ministry, the unpretentious loft room wherein He gathered His disciples for the Last Supper. But they were exquisite, of alabaster hue and perfect workmanship. Colonnaded, one seemed to be for utility: opposite it stood another, whose glazed windows suggested a dormitory and refectory. Between them, facing us across the pavement, rose the church. I thought it must be the epitome of that English Perpendicular style which our architects strove to emulate from drawings done by some of those who remembered. Slender pillars, ogive arches and windows, saints in their niches, rose beneath twin towers. Melody wafted thence, notes surely like those from the harps of Paradise. The doors stood open in an eternal welcome.

We hastened among the flowerbeds. Gravel scrunched under our feet, until the courtyard rang. In the mosaic I saw, delicately wrought, a Tree of Jesse.

We halted at a staircase flanked by sculptures of the Lamb and the Fish. Suddenly I unbuckled my helmet and tucked it beneath my arm. A man had stepped out onto the porch.

He came to stop, there above us, handsome, solemn, hair and beard as white as his robe, right hand lifted in benediction. Upon his brow shone a golden crown. In his left hand he bore a



trident, and he had limped. A supernatural thrill passed over me, for I recalled the Fisher King.

Organ tones formed words of Norman French. "In the name of the Father, and of the Son, and of the Holy Ghost, well met, pilgrims. Enter ye now unto the mystery ye have sought, that which shall save your peoples."

Father Marcus' response wavered. "Have we, have we indeed come . . . to the abiding place . . . of the Sangreal?"

"Enter," said the crowned man gently, "and see, and give praise."

Sir Eric, too, removed his helmet. He laid it down beside his shield and scabbarded sword. The men-at-arms did likewise, and I. We signed ourselves. I felt that I read anguish, indecision, behind the knight's stiff features, and wondered anew, with a touch of dread, what wrongness possessed his soul.

"Come," said the crowned man, and gestured us toward him.

Insalith hesitated. "I am not christened," he said in a near whisper.

The other smiled. "You will be, my son, you will be, as will every sentience in the universe. Come you also and worship."

Slowly, we mounted the stairs.

For a moment, splendor overwhelmed me. Windows depicting Bible scenes cast their rainbow glow over nave, aisles, choir, columns, the Stations of the Cross wrought in gold. Under a great rose window, candles burned before an image of the Virgin that seemed alive in its tenderness and majesty. Music soared amidst fragrances. At a font shaped like a lily, we dipped our fingers and again dared bless ourselves.

Our gaze went to the altar. Upon it, below a crucifix of piteous realness, sheened a silver chalice. It must have stood three feet high on a broad base, though the grace of its proportions came near cloaking that size. Attired in white habits, two women kept vigil at the sides, their heads bowed in prayer, beads streaming between their fingers.

The man of the trident urged us onward. At the rail he turned about, traced the Cross, and said gladly:

"Lo, here is the joy of chivalrous desiring, the Grail of Our Lord and Saviour Jesus Christ. When your fathers ventured against the paynim of the stars, God transported it hither and set it in

care of these pure maidens and my unworthy self, that we might guard it until men had need of it among them. Fear not, my sons. We shall take communion, and you shall abide this night, and tomorrow you shall bear the Holy Grail back to your people."

Father Marcus prostrated himself. Insalith went on all fours, the Wersgor attitude of submission. After a heart-beat, Samkin, Hobden, and I knelt. Yet — I quailed in my breast — we could not take our heed off the sisters. They were identical twins, young, fair beyond any man's dreams. Their garb did not conceal sweet curves beneath. Oh, I thought amid the racketing of my pulse, God forgive me my weakness, but it has been a long journey.

And Sir Eric stayed on his feet. His own eyes were aimed at the warden, like lanceheads.

Did the lame one show the least unease? "Why do you stand thus, my son?" he asked. "Kneel, confess your sins — to God Himself, Who will absolve you — while I fetch the wine and the Host."

The knight's words tramped forth: "Why is the cup so large? I expected it would be small and simple, as befitting celebrants who were not wealthy. This is the size of a soup kettle."

"It must needs hold the salvation of the world."

"Let me examine it. You understand. If it is a forgery, and I bring it home, I shall be doing the Devil's work."

"Why, no. I agree, well, true authentication is necessary. But you are not qualified to judge. It will be no sin if you convey the vessel to those who are — your Pope, your King-Emperor. Rather, that is your duty."

"Step aside! On my head be this." And Sir Eric started past the crowned man, toward the chancel.

I gasped in horror. "Sacrilege!" hooted Father Marcus from the floor.

The warden snatched after the prince. Sir Eric shoved him off. He stumbled, his trident clattered to the flagstones. "Beatrice, Berenice, stop him!" he cried. "Sir, you'd not lay hand on the holy sisters, would you?"

The maidens moved to bar Sir Eric's way. Gently but remorselessly, he cast arms about their waists and dragged them from in front of altar. He let them go, took the chalice, and lifted. I saw by

the motion that the weight was heavy.

It was as if time died while he turned the huge cup over and over beneath his eyes. Finally he looked across it at the damsels. They had shrunk back against the rail, but the glances that responded to his were quickening away from timidity. Even in the wan light, I saw a flush spread across his cheeks, and theirs.

The crowned man picked up his trident and shook it. "You'll burn forever, unless you know not what you do!" he shouted. "Englishmen, seize him! Save the Holy Grail!"

I groaned as my heart tore asunder.

Sir Eric set the chalice down again. Luminance ran blood-red and heaven-blue over his mail. Straightening, he called to us. "We'll see who is the evildoer. If I am, how could I be a menace to the veritable Grail? And should not its guardians be perfect in the Faith? Father Marcus, arise and put these persons through the Catechism."

He thumbed his radio while he strode down to us. I heard him speak a command, not to the men aboard our ship but directly to the computer. "Activate your theological program."

Our chaplain may have been somewhat unversed in human ways, but he could scarcely miss seeing how the warden snarled or hearing the sisters shriek. I thought fleetingly that those feminine cries were not altogether agonized. The priest could be swift when he chose. He sprang to join Sir Eric in confrontation of the robed man.

"My good sir," he puffed, "you should be happy to establish your bona fides by explicating a few simple doctrinal points. From whence proceeds the Holy Ghost?"

"Are you mad too?" yelled the crowned one. "If I were iniquitous — in as grave a matter as this — would God let me administer the sacraments? They would not be valid."

Father Marcus stiffened. "Ah, ha! That sounds very much like the Donatist heresy. Let us go into details, if you please."

Pausing only to consult his reference by radio, our chaplain set question after question. They bewildered me. I must needs admire the boldness with which the man stood his ground and flung back responses.

After minutes, Father Marcus wheezed a sigh, shook his head,

and declared, "No more. You have in addition exposed yourself as an Arian, a Pelagian, a Catharist, and a Gnostic. This cup of yours must be a blasphemous fraud. Who are you, in truth?"

Sir Eric crouched, a leopard out of England's arms. His gaze lashed forth, to Insalith in the shadows. "You led us hither," he said low.

The Wersgor reached under his coat. Forth came an energy pistol. "Hold where you are," he rasped.

We froze. A single sweep of the beam from that weapon could incinerate us. He stalked toward the altar.

"Wait!" howled the crowned man, in the principal Wersgor tongue. "You'd not set it off?"

"Yes," said Insalith. "Destroy the evidence, and these monsters as well." He entered the chancel. The maidens screamed and fled from him. He reached the false Grail.

Sir Eric pounced. He snatched the trident from its owner's grasp, and hurled it. Insalith lurched. Tine-deep, the weapon shuddered in his belly. He fell, and his blood washed the floor of that house which was never a church.

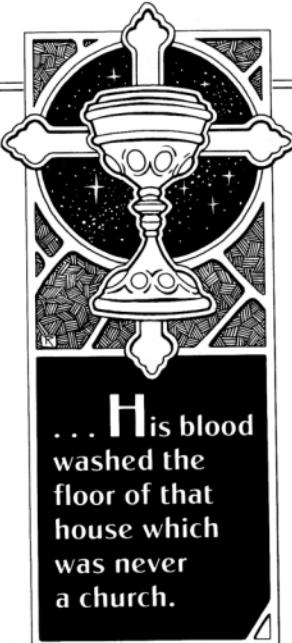
Bonaventura throbbed about us. Stars crowded the viewports. We were bound home.

Sir Eric summoned us to the mess-room — Father Marcus, the two crewmen, the two men-at-arms, the two maidens, and myself. Beatrice and Berenice had discarded their coifs, revealing topaz-hued locks, and belted their gowns closely, revealing marvelous shapes. Weary but triumphant, the knight laughed aloud at the head of the table and bade us be seated.

"The prisoner has confessed," he said. "I needed no violence upon him. His nerve broke when I threatened to take that alleged relic along on board."

"What is it in truth, what device of Satan?" asked Father Marcus low.

Sir Eric grinned. "Nothing so terrible," he answered, "although dangerous enough. It contains a nuclear bomb in the base, using a fissionable transuranic of small critical mass. And there are sensors worked into the ornamentation, and a recognition program keyed to detonate it when in the presence of either my royal father or the Pope. The blast would not have been of more than



tactical force, but it would have sufficed to lay Troynovaunt waste, and thereby all our hopes."

"This, then, was a . . . a Wersgor plot from the . . . beginning, my lord?" I stammered.

Sir Eric nodded. "Aye, hatched in a secret base of their outlaw remnants — whose location I now have. He who played the Fisher King is a human traitor, a criminal who fled from justice. The conspirators found him, trained him, and promised him rich reward. These damsels" — he bowed toward them — "are clones of a comely woman who never knew that a minor *accident* was arranged to remove a few cells from her. Accelerated growth produced adult bodies within a half-dozen years." He smiled. "Yet they remain daughters of Eve, raised among falsehoods and, therefore, innocent in themselves. We'll bring them home baptized, I'm sure. Their story, their virginity, their consecration as true nuns will doubtless inspire many of us to live better lives."

The twins blushed rosy. However, the glance they exchanged, out of large blue eyes, seemed less than elated.

"The whole thing was cleverly done."

Sir Eric went on. "We could well have been deceived, and carried yon fatal engine back. It's God's mercy that petty flaws in the plan, because the Wersgorix are not human and do not understand us in our innermost depths — those flaws betrayed it."

"What were they, my son?" wondered Father Marcus. "I am faint to think a divine revelation was vouchsafed you."

"Oh, no," denied Sir Eric, raising his palm. "Never me. I am no saint, but a sinner who stumbles more often than most. On that account mayhap my hope of doing some holy work was higher than the conspirators foresaw, and led me to look closer when their illusions did not quite meet my expectations.

"I thought that the dragon yielded far too easily, the more so when the Singing Sword was — well — In a matter of such importance, would Satan let his minion flee after a few cuts? Could the beast have been merely a biotechnical device, set there because it belonged in the picture but not intended to give serious resistance?

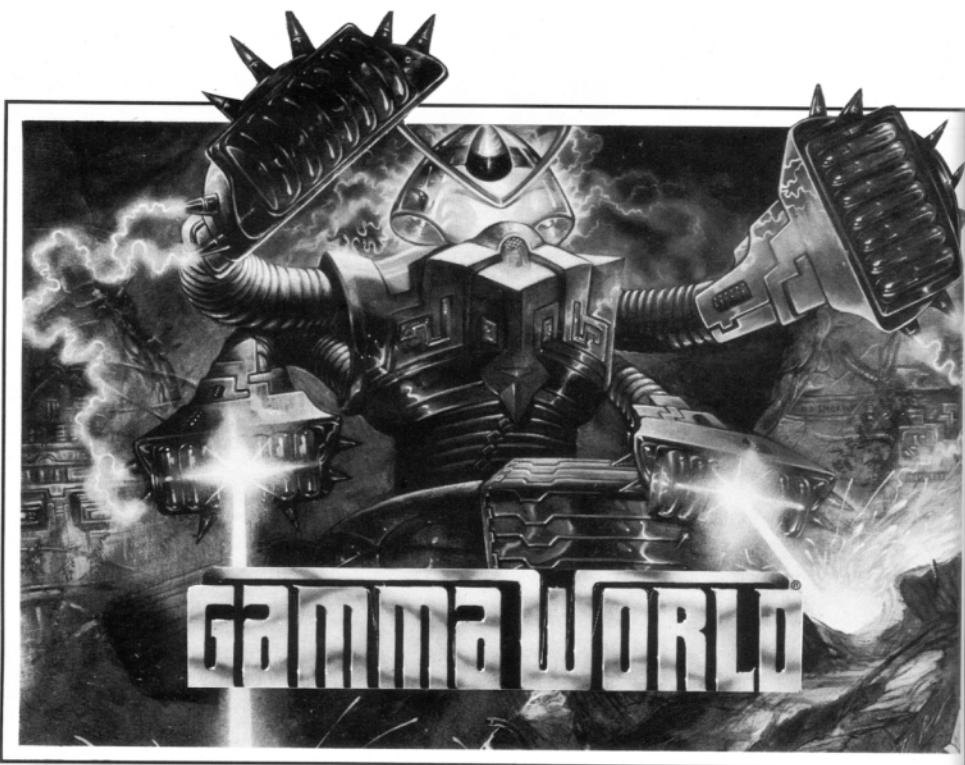
"The Fisher King bore no sign of being ordained, and legend does not make him a priest. But he offered us Holy Communion. He spoke reverently of the Grail, but did not doff his crown in its chapel. His haste to conduct the business and see us begone struck me as unseemly.

"The chalice itself was larger and massier than was reasonable.

"Er . . . be it confessed, and intending no discourtesy, when I embraced these two charming young ladies, what immediately stirred in my heart was lust. Would God have made a person as gross as me the bearer of His Grail?"

Sir Eric winced. "I want to believe," he finished. "How I longed to believe! But I decided we should put matters to a test. If I were mistaken, on my soul be the wrath. God knows I am weak and sinful, but He also knows I swore an oath of fealty to King and Church."

We men hailed him with the honor that was his due, the maidens with adoration. Those twain had not hitherto understood how wretched was their lot. Now joy blossomed in them, and a convent was the last place they wished to enter. I thought that Father Marcus had better make haste to give them Christian instruction, and my lord to find them good husbands when we came home. ▲



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the
high crusade
Science Fiction Conquest Game

By David Cook





by David Cook

Based on the Novel **The High Crusade**
by Poul Anderson

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IMPORTANT NOTE: Information vital to play is presented throughout these rules. You must read every section through carefully in order before starting to play, even if you are an experienced wargamer.

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PART

1

INTRODUCTION

A.D. 1345 — England prepares for a war against the French. Baron Sir Roger de Tourneville gathers his knights, men-at-arms, and hired mercenaries. They meet at Castle Ansby.

A.D. 1345 — A scouting ship of the great Wersgorix Empire, interstellar conquerors and masters of this portion of the Gal-

axy, travels through space. The Wersgorix look for a new planet to settle. The Wersgorix ship finds a planet and lands near an isolated and insignificant village, named Ansby. The crew prepares to terrorize the natives and secure the planet for the Wersgorix.

Everything goes wrong. Sir Roger's men, their blood fired and their souls supported by the Church, charge the alien "demons." The Wersgorix crew is overwhelmed and all are slain but one. The prisoner is most cooperative, especially with One-Eye Hubert, the executioner, waiting in the wings. All of Ansby prepares for a journey.

With Sir Roger leading them, the villagers of Ansby embark on a Crusade — into space aboard a captured Wersgorix

spaceship. With their swords and trebuchets, the Crusaders, take on the might of the Wersgorix Empire. The High Crusade has begun.

THE HIGH CRUSADE™ game is a strategic-level recreation of the events of Poul Anderson's novel *The High Crusade*. The game begins after the Crusaders' capture of their first planet. The Crusader Player attempts to Convert the Empire's Thrall Races, make alliances with Independent Races against the Empire, and lead this coalition to victory. The Wersgorix Player must frustrate Crusader attempts to gain Thrall Race and Independent forces, and marshal his own scattered units to meet the threat of this strange, unknown invader from deep space.

PART

2

GAME PARTS

A. PARTS LIST

Each copy contains:

- one 22" x 33" game map
- one sheet of 200 cardboard playing pieces
- one 16-page rules booklet
- two 6-sided dice (not included in magazine edition)
- one game box (not included in magazine edition)

We hope that you enjoy this game. If you have any questions about the rules, please write to TSR. You must include a self-addressed stamped envelope. Address your questions to: Rules Editor, THE HIGH CRUSADE™ Game, TSR, Inc., POB 756, Lake Geneva, WI 53147.

B. THE MAP

The game is played on a map showing part of the Wersgorix Empire. A hexagonal grid has been superimposed on the area to control the movement of the pieces. These hexagons (hexes) show either space or a portion of a planet. Each space hexagon is five light years from side to side. Each planet shown is actually an enlargement of a tiny point in a single

space hex. The Crusader capital, the Wersgorix imperial capital, and the home planets of the Independent Races are named. Printed next to each planet is its Terrain Modifier and boxes for Thrall Races and Alert Markers. Some planets have fort and fortress symbols on them. Planets are organized into Defense Zones (or DZs), and all planets in the same Defense Zone are set against the same color background. Each Defense Zone has a capital and a box in which to place the Zone's Alert Satellite Marker. There are arrows from the Alert Satellite box to all the planets of the same Defense Zone. The map shows various tables and tracks used to control and record game functions. These include the:

- CRUSAIDER COMBAT TABLE, used to resolve combats conducted by Crusader forces;
- WERSGORIX COMBAT TABLE, used to resolve all combats conducted by Wersgorix and Crusader Ally forces;
- GAME TURN/EQUIPMENT TRACK, used to record the passing of Game Turns, as well as the Crusader Player's current Equipment Point total, and the combat modifiers gained for this;
- STRENGTH TRACKS, used to record the current strength of all armies and fleets currently in play;
- I.Q. TRACK, used to record the Wersgorix Player's current intelligence concerning the Crusaders and the combat modifiers gained for this;
- RANDOM EVENTS TABLE, used to find the random event for each player for the Game Turn;
- CRUSAIDER TITLE BOXES, used to hold Title Markers representing titles

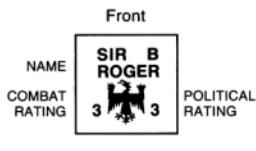
given to various Crusader leaders.

C. THE PLAYING PIECES

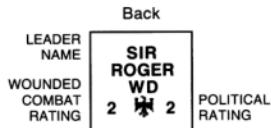
The sheet of die-cut cardboard pieces contains four types of playing pieces: LEADERS, COMBAT UNITS, THRALL RACES, and GAME MARKERS. Samples of each type are shown in the Sample Unit Diagrams below:

Sample Unit Diagrams

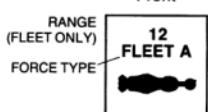
SAMPLE CRUSAIDER LEADER



Title (B-Baron, K-Knight)



WINTER 1983 27

SAMPLE FLEET/ARMY UNIT

FORCE ID.

**IONIC STORM MARKER**

NAME: This identifies the leader. Crusaders are named to identify fiefs and random events.

RANGE
(FLEET ONLY)
FORCE TYPE



FORCE ID.

**DEFECTOR MARKER**

COMBAT RATING: This is the modifier that leader can apply to any combat he takes part in.

FORCE TYPE



FORCE ID.

**INSIDE MARKER**

POLITICAL RATING: This is the modifier the leader can apply to negotiation and alliance attempts.

Back



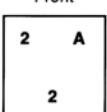
FORCE ID.

**FIEF MARKER**

WOUNDED: This indicates the leader has been wounded in combat or has fallen ill.

SAMPLE THRALL RACE

CONVERSION
NUMBER



ATTITUDE

**CASTLE MARKER**

RANGE: The range for a fleet is the number of hexes it can move per Game Turn on the galactic map.

COMBAT
STRENGTH

**TITLE MARKER**

FORCE IDENTIFICATION: The letter identifies which fleet or army the piece is. For every Force I.D. there will be a matching Force Strength piece to be used on the STRENGTH TRACK.



Back

**UNKNOWN STRENGTH CHIT**

CONVERSION NUMBER: This number or less must be rolled on one die for the Crusader Player to convert the Thrall Race, causing it to join his side.

**UNCOLLECTED STRENGTH POINTS MARKER**

ATTITUDE: This indicates the general attitude of the Thrall Race: A — Agrarian; S — Spiritual; W — Warlike.

**I.Q. POINTS MARKER**

COMBAT STRENGTH: This is the number of Strength Points the Thrall Race can add to the Crusader army that frees the race. It is also the number of army Strength Points the planet has as a garrison to protect it from attack.

SAMPLE MARKERS

Front

**GARRISON STRENGTH MARKER**

Back

**EQUIPMENT POINTS MARKER**

ALERT SAT
OFF

**ALERT SATellite ON**

ALERT SAT

**GAME TURN MARKER**

ALERT

**ALERT/HERESY MARKER**

HERESY

**GRAIL MARKER****PART****3****HOW TO SET UP**

1. Unfold the map, bending it against the creases and lay it on a flat surface.
2. Choose who will be the Crusader Player and who will be the Wersgorix Player.
3. Punch out the playing pieces and sort them according to color and type.
4. Turn the Thrall Race pieces face down and mix them up. The Wersgorix Player

places these face down on the map. He cannot look at the front of any piece until all have been placed. There are 18 Thrall Race pieces and 20 Thrall Race boxes, so there will always be two boxes left empty. Once all Thrall Races have been placed, the Wersgorix Player can look at any of them at any time during the game. The Crusader Player can only look at the front of the Thrall Race pieces when permitted by the rules.

5. Put the eight Unknown Strength Markers in a cup called the STRENGTH CUP.

6. The Wersgorix Player assigns Strength Points to his fleets and armies and then places the appropriate units in the capital hex of each Defense Zone (except for the Thraxian Zone). The list below shows the starting deployment of Wersgorix forces. The Fleet or Army Strength Marker whose Force Identification matches the combat unit is placed on the STRENGTH TRACK in the box equal to the unit's current strength. No fleet or army can ever have more than 10 Strength Points assigned to it. Wersgorix leaders are turned face down, mixed up, and deployed with Wersgorix units. After they are deployed, the leader pieces are turned face up.

Wersgorix Force Deployment

(DZ = Defense Zone)

Wersgorix DZ	10 Army Strength Points 10 Fleet Strength Points 1 Leader
Orange DZ	5 Army Strength Points 5 Fleet Strength Points 1 Leader
Jair DZ	10 Army Strength Points 10 Fleet Strength Points 1 Leader
Green DZ	10 Army Strength Points 10 Fleet Strength Points 1 Leader
Purple DZ	5 Army Strength Points 5 Fleet Strength Points 1 Leader
Pthng gung Ashenk DZ	10 Army Strength Points 10 Fleet Strength Points 1 Leader

In addition, the Wersgorix Player places 5 Army Strength Points, 5 Fleet Strength Points, and 1 Leader on any planet of the Thraxian Defense Zone other than Thraxian itself.

7. The seven Alert Satellites are placed in the Alert Satellite Boxes. The satellite in the Thraxian Defense Zone is set up with the ON side face up; all other satellites begin the game with their OFF sides showing.

8. The I.Q. Points Marker is placed on 1 on the I.Q. TRACK.

9. The Crusader Player places his pieces on the planet Thraxian. His forces are as follows: 20 Army Strength Points; 25 Fleet Strength Points; a Castle Marker; a Church Marker; and all Crusader leaders. No more than 10 points can ever be assigned to any Crusader-controlled fleet or army.

10. The Equipment Point Marker is placed on 3 on the EQUIPMENT TRACK.

11. A Fief Marker of the Crusader Player's choice is placed in the Alert Box of Thraxian.

12. The GAME TURN MARKER is placed in the first box of the EQUIPMENT TRACK.

13. Begin play with the CRUSADER CONVERSION PHASE of Game Turn 1.

A. REINFORCEMENT AND RANDOM EVENTS PHASE

If it is Game Turn 1, skip this Phase and proceed to Step 1 of the CRUSADER CONVERSION PHASE.

1. If there are any Heresy Markers on the map, the Crusader Player checks to see if the Heresy spreads. One die roll is made for every Heresy Marker on the map at the beginning of the Phase. On a die roll of 1 or 2, a Heresy Marker is placed on the Converted planet nearest to the heresy being checked. If two eligible planets are of equal distance, the Wersgorix Player can choose which planet is given the Heresy Marker.

2. Both Players place their reinforcements. For every capital a Player controls, he receives 1 Strength Point of reinforcement. The Crusader Player controls all capitals with a Castle Marker on them. The Wersgorix Player controls all others. Strength Points can be entered as fleet or army points. They are placed in any capital the Player controls, except that reinforcements cannot be placed in a capital under siege. A Player may concentrate his reinforcements in a single capital or divide them among several capitals. If the Player has a fleet or army in the capital in which the reinforcements enter, he may add the reinforcements directly to that piece, adjusting the proper Strength Marker on the STRENGTH TRACK. If the Player has fleet or army pieces available, he may create a new fleet or army. Army Strength Points may also be entered as a Garrison Marker. If no fleet unit is available, the Player may still create Fleet Strength Point reinforcements by placing his Uncollected Points Marker on the proper number of the STRENGTH TRACK. These Points can be collected by any fleet that ends its turn in an besieged capital controlled by the Player.

3. The Crusader Player rolls one die for each Ally he has. The result is the number of Strength Points the Ally has for reinforcements that Game Turn. These reinforcements must be entered on the home planet of that Ally. The Crusader Player can enter these points as either Ally Fleet or Ally Army Strength Points. If a Crusader Ally army or fleet is on its home planet at the beginning of this Phase, reinforcements can be added directly to the unit. Army Strength Points can be used to create Garrison Markers if it is impossible to reinforce an existing Ally army or to create a new one. Fleet Strength Points can be taken as Uncollected Strength



HOW TO PLAY

This game is divided into a number of GAME TURNS. Each GAME TURN is broken into a number of different parts called PHASES. Each PHASE deals with a specific part of playing the game. PHASES are divided into numbered STEPS. All Steps in a Phase must be completed before going to the next Phase, and all Phases must be completed before advancing to the next Game Turn. The order of Phases and Steps is then repeated for each Game Turn.

Points if it is impossible to reinforce an existing Ally fleet or to create a new one. Crusader Strength Points can never be combined with Crusader Ally Strength Points to create a single unit.

4. The Crusader Player rolls two dice and finds his result on the RANDOM EVENTS TABLE. Depending on the results, the events can be immediately put into play or applied at a later Phase of the Game Turn. An explanation of each result can be found at PART 11. The Wersgorix Player repeats the procedure to find his random event for the turn.

5. If either player has a captured Enemy leader, he checks to see if the Enemy leader defects. The player rolls one die; if he rolls a 6, the Enemy leader has defected and is now treated as a Friendly leader in all respects. The player places a Defector Marker on the leader. If any other number is rolled, the Enemy leader remains loyal to his own side.

6. If there are no Ionic Storms on the map, proceed to the CRUSADE CONVERSION PHASE. Otherwise, roll one die to find the direction the Ionic Storm will move (use the IONIC STORM DIRECTION INDICATOR). Roll a second die to find how far the storm will move in that direction. Move the Ionic Storm accordingly.

B. CRUSADE CONVERSION PHASE

If the Crusader Player does not have any Crusader leaders on planets with Thrall Races, go to the CRUSADE FIEF ASSIGNMENT AND TITLE PHASE.

On any planet where the Crusader Player has a Crusader leader, the Crusader Player can look at the face-down Thrall Race of the planet. After examining the Thrall Race, the Crusader Player announces whether he is attempting to Convert that race. Use the procedure in PART 8 to resolve all Conversion attempts.

C. CRUSADE FIEF ASSIGNMENT AND TITLE PHASE

1. The Crusader Player assigns all newly Converted Thrall Races as Fiefs to the appropriate Crusader leaders. That leader's army strength is adjusted for the Strength Points received from the Thrall Race. If a fleet and army is indicated, a Thrall Race fleet and army are placed on the planet. An Unknown Strength Marker is then randomly chosen from the STRENGTH CUP. This is the strength of both the army and fleet and is noted on

the STRENGTH TRACK. The Unknown Strength Marker is then set aside and is not used for the rest of the game.

2. The Crusader Player can give Titles to any eligible leaders, according to the procedures in section E of PART 8.

D. CRUSADE MOVEMENT PHASE

1. Roll two dice for each wounded Crusader leader on the map. If a 2 is rolled, the leader dies and the piece is removed from play. If a 9 or higher is rolled, the leader recovers and is flipped back to his unwounded side.

2. The Crusader Player moves Crusader-controlled pieces, according to the rules and restrictions given in PART 6.

E. CRUSADE COMBAT PHASE

1. The Crusader Player conducts all combats that he desires, within the limits of the rules given in PART 7.

2. The Crusader Player checks to see if any of his besieged forts or fortresses fall to siege.

F. CRUSADE ALLIANCE PHASE

The Crusader Player checks to see if he has any leaders on the home planet of an Independent Race, or if he received an Ambassador result on the RANDOM EVENTS TABLE this Game Turn. If neither situation applies, proceed to the WERSGORIX ALERT PHASE.

The Crusader Player can select one eligible Independent Race and attempt to form an alliance with them. Use the procedure given in PART 9 to resolve the alliance attempt.

G. WERSGORIX ALERT PHASE

The Wersgorix Player checks his I.Q. TRACK to find his current number of I.Q. Points. He receives one Alert Marker for every I.Q. Point he has, and one extra Alert Marker if the Initiative Random Event has been rolled. He can then Alert one planet for every Alert Marker he has available. The Wersgorix Player can only Alert planets within 8 hexes of a planet that is Alerted or has Crusader-controlled units on it at the beginning of the Phase. If all Unalerted planets are greater than 8 hexes from these, the Wersgorix Player must Alert the planet closest to one of the above listed types of his choice. When all

planets in a Defense Zone are Alerted, the Zone's Alert Satellite Marker is flipped over to its ON side. The individual Alert Markers of the planets in that Zone can be removed.

H. WERSGORIX MOVEMENT PHASE

1. Roll two dice for each wounded Wersgorix leader on the map. If a 2 is rolled, the leader dies and the piece is removed from play. If a 9 or higher is rolled, the leader recovers and is flipped back to his unwounded side.

2. The Wersgorix Player moves his pieces, according to the rules given in PART 6.

I. WERSGORIX COMBAT PHASE

This Phase is handled in the same manner as the Crusader Combat Phase except that the Wersgorix Player is conducting combat and resolving sieges according to the rules given in PART 7.

J. ALLIANCE DISRUPTION PHASE

If the Wersgorix Player does not have a leader on a Crusader Ally home planet, proceed to the GAME TURN RECORD PHASE.

If the Wersgorix Player has a leader on a Crusader Ally home planet, he can attempt to break the Crusader Alliance, using the procedure given in PART 9.

K. GAME TURN RECORD PHASE

The Game Turn Marker is advanced one space on the EQUIPMENT TRACK. If the Game Turn being played is the final Game Turn of the scenario, both players check the Scenario Victory Conditions to see who has won the game.



PART

5



HOW TO WIN

The Wersgorix Player can win any scenario by:

- Eliminating all Crusader units and leaders.
- Preventing the Crusader Player from fulfilling the Scenario Victory Conditions (see PART 10).

The Crusader Player can win any scenario by fulfilling the Scenario Victory Conditions (see PART 10).

PART

6



HOW TO MOVE

A. MOVEMENT RESTRICTIONS

During the proper MOVEMENT PHASE, each Player can move as many of his pieces as he chooses to move, within the following restrictions:

A Player can move his pieces only during his MOVEMENT PHASE, never during the other Player's MOVEMENT PHASE.

Armies and leaders can move through space only when carried by fleets (see E below).

The movement of unalerted Wersgorix pieces is restricted (see F below).

B. HOW TO MOVE FLEETS

Each fleet has a Range Number printed on it. This is the number of hexes the fleet can move in a single turn. No fleet is required to move any or all of its Range, but the Range cannot be saved from turn to turn.

A fleet must always end its move in a hex



occupied by a planet. If a fleet cannot end its move on a planet, it cannot be moved.

A fleet can never enter a hex that is occupied by an enemy piece or an Enemy-controlled fort or fortress.

C. HOW TO MOVE ARMIES

Armies and Garrison Markers can move from one land hex to another during a turn. They can enter a hex containing enemy units only to besiege Enemy units inside a fort or fortress in the hex.

At the beginning and end of its movement, an army can pick up or drop off Garrison Markers. This does not affect movement of the army in any way. If Strength Points are picked up, the Army Strength Marker on the STRENGTH TRACK is increased by the number of points collected and the Garrison Marker is removed from play. If Strength Points are dropped off, a Garrison Marker is placed on the map and the proper number of Army Strength Points is subtracted from the STRENGTH TRACK.

D. HOW TO MOVE LEADERS

A leader must be aboard a fleet to move through space.

A leader on a planet can move from one land hex to another during one Turn. A leader can enter an Enemy-occupied hex only if the leader is stacked with a Friendly unit that is besieging an Enemy-occupied fort or fortress in the hex.

Armies, fleets, and garrisons do not need leaders in order to move; combat units without leaders move normally.

Captured leaders can be moved by the capturing Player, so long as at least 1 Army or Fleet Strength Point is stacked with them. If this condition is not met at any time, the leader has escaped and he returns to the control of the owning Player.

E. TRANSPORTING PIECES

The only way armies, garrisons, and leaders can travel from one planet to another is to be transported by a fleet. A fleet can carry 1 Army Strength Point or Garrison Strength Point for each Fleet Strength Point it has. Any number of leaders can be carried by a fleet.

Friendly pieces that are stacked with or adjacent to a Fleet can be loaded if they have not moved that turn. A fleet can load and unload leaders and units at any point during its move, but unloaded pieces can-

not be moved any further that turn. Pieces can be unloaded in any unoccupied hex of a planet that the fleet can enter.

Crusader armies, garrisons, and leaders can be carried on Ally fleets. Ally armies, garrisons, and leaders can be carried on Crusader fleets.

F. ALERTING WERSGORIX PLANETS

Wersgorix pieces cannot leave the Defense Zone in which they begin play until one planet of that Zone has been Alerted. A Wersgorix fleet that begins its move on an Alerted planet can move to a different Defense Zone.

Units in an Defense Zone without Alerted planets can move freely within that Zone only.

A Wersgorix planet is Alerted when any of the following circumstances apply to it:

- A planet is Alerted if the Wersgorix

Player places an Alert Marker on the planet during the WERSGORIX ALERT PHASE (see PART 4, section G).

- A planet is automatically Alerted if any Crusader, Converted Thrall Race, or Crusader Ally piece is on the planet at the start of the WERSGORIX MOVEMENT PHASE.

- If the Jair Independent Race forms an alliance with the Crusaders, all planets in the Jair Defense Zone are Alerted; if the P'thng/gung or Ashenkgori Independent Races form an alliance with the Crusaders, all planets in the P'thng/gung/Ashenk Defense Zone are Alerted.

- All planets of any Defense Zone are Alerted if the capital of that Zone is attacked.

- All planets on the map are Alerted if a Crusader or Crusader Ally piece is 6 hexes or less from the planet Wersgorix at the beginning of the WERSGORIX MOVEMENT PHASE.

attack an unconverted Thrall Race. They can attack a heretical Thrall Race.

C. HOW TO RESOLVE COMBAT

The attacking Player announces all fleet and army attacks he will make on a planet before resolving any attacks on the planet. He then resolves them in whatever order he desires.

The attacker totals the Strength Points of all units involved in the attack. The defender totals the Strength Points of all defending units in the hex. Fleets cannot add to the defense of armies or Garrison Markers and vice-versa. Armies and Garrison Markers can be combined for attack or defense. If the combat is a ground combat and the defender is in a hex with a Fort or Fortress, the defender can choose to place all armies and Garrison Markers in the hex inside the fort or fortress. An Inside Marker is placed on the defending pieces inside. The attacker can immediately choose to move into the hex, placing the fort or fortress under siege (see D, below). If the attacker chooses to conduct a normal attack against units inside a fort or fortress, the defender adds the value of the fort or fortress to his Strength Point total. A fort has a value of 4 Strength Points; a fortress has a value of 6. If the defender chooses not to enter the fort or fortress, the fort or fortress has no effect on combat.

The defender's total is subtracted from



A. WHO CAN ATTACK

Each player can attack only during his own COMBAT PHASE. The attacking pieces are called the attacker, the non-attacking pieces are called the defender. The following restrictions apply to all attacks:

- Pieces are never required to attack.
- The attacking force must be in the defender's hex or in a hex adjacent to the defender for combat to occur.
- A piece can only attack once in a Phase or be attacked once in a Phase.
- A Friendly-occupied fort or fortress can attack an Enemy fleet located on the same planet (see C, below).

B. ATTACK RESTRICTIONS

- Fleets can never attack Armies or Garrison Markers.
- Armies and Garrison Markers can never attack fleets.
- Crusader-controlled pieces cannot

the attacker's total. This positive or negative number is matched to the correct column on the the attacking Player's COMBAT TABLE. If the attacking force is a Crusader Ally, the combat is resolved on the WERSGORIX COMBAT TABLE. If the attacking force is Crusader, the CRUSADE COMBAT TABLE is used. If the attacking force has both Crusader and Crusader Ally Strength Points, use the combat table of the force that has the most Strength Points present. If the strengths are exactly equal, use the CRUSADE COMBAT TABLE. The WERSGORIX COMBAT TABLE is used for any attacking force controlled by the Wersgorix Player.

The following conditions will cause a column shift on the COMBAT TABLE used to resolve the attack.

Attacker's Column Shifts

- Column shifts to the right equal to the Combat Rating of one leader in the attacking force.
- 1 to the right if Brother Parvus is in the attacking force (Crusader Player only).
- 1 to the right if Crusading Fervor is in effect (Crusader Player only).
- 1 to the right if the True Grail is with the attacking force (Crusader Player only).
- Column shifts equal to the Equipment Point modifier (Crusader Player only).
- Column shifts equal to the I.Q. Point modifier (Wersgorix Player only).
- Column shifts to the right equal to the Terrain Modifier of the planet (if the combat is ground combat and if the modifier is preceded by an A.).

Defender's Column Shifts

- Column shifts to the left equal to the Combat Rating of one leader in the defending force.
- 1 to the left if Brother Parvus is in the defending force (Crusader Player only).
- Column shifts to the left equal to the Equipment Point modifier (Crusader Player only).
- Column shifts to the left equal to the I.Q. Point modifier (Wersgorix Player only).
- Column shifts to the left equal to the Terrain Modifier of the planet (if the combat is ground combat and if the modifier is preceded by a D.).

Each player adds up all his column shifts. The smaller total is subtracted from the larger. The result is the final number of column shifts in favor of the player with the larger total. The final result can never

be more than three column shifts.

The attacker rolls two dice. To find the results of the combat, find the row matching the number rolled on the dice. Where the row and column meet will be a listed result. The combat results are explained beside each table.

The Player who suffered losses can, at his option, attempt to reduce the number of Strength Points he loses if he has a leader present. The Player announces the number of Strength Point losses he will attempt to ignore. One die is rolled. If the number is equal to or less than twice the number of Strength Points being ignored, the attempt has failed and the leader is wounded. The leader piece is flipped to its wounded side. If the leader is already wounded, he has been killed and is removed from play. If the die roll is greater than twice the losses being ignored, the attempt has been successful and the specified Strength Points are not lost. (NOTE: If a force is totally destroyed in combat, any leader stacked with that force is killed, unless this procedure is used to save at least 1 Strength Point. If the die roll is not sufficient to save 1 Strength Point, the leader is killed.)

Units can't advance after combat, except that units that have captured a fort or fortress can advance into and occupy it.

Each time a Player causes Enemy forces to take losses without suffering any losses himself, he earns 1 I.Q. Point if he is the Wersgorix Player or 1 Equipment Point if he is the Crusader Player. The proper marker is moved up on its track to note this.

If an occupied Fort or Fortress is captured by storm, the capturing Player automatically gains 1 I.Q. or Equipment Point.

If a Player captures an Enemy leader, the Enemy leader may Defect during a later Game Turn. See Step 5 of the REINFORCEMENT AND RANDOM EVENT PHASE. Captured leaders can never be executed.

Any leaders alone in a hex that is attacked by an enemy force are automatically captured. No combat is conducted.

D. FORTS AND FORTRESSES

All forts and fortresses marked with a Castle Marker are controlled by the Crusader Player. All forts and fortresses occupied by a Wersgorix unit are controlled by the Wersgorix Player. Forts and

fortresses without Castle Markers or Wersgorix units in them are uncontrolled.

An occupied fort or fortress can be used to attack Enemy fleets during the Enemy MOVEMENT PHASE. If the fort or fortress is occupied and not under siege, it can attack any Enemy fleet that attempts to leave any hex of the planet and travel into space. Fleets can move from one hex of a planet to another on the same planet without being attacked. An attack is resolved using the Strength Points of the fort (4) or fortress (6) and is calculated as a normal attack. However, the WERSGORIX COMBAT TABLE is always used to find the outcome, even if the attacker is the Crusader Player. If the combat result indicates a loss to the attacker, the result is ignored. A fort or fortress can attack any number of times during a turn, but can only attack each enemy fleet once. (This rule is an exception to section A. WHO CAN FIGHT.)

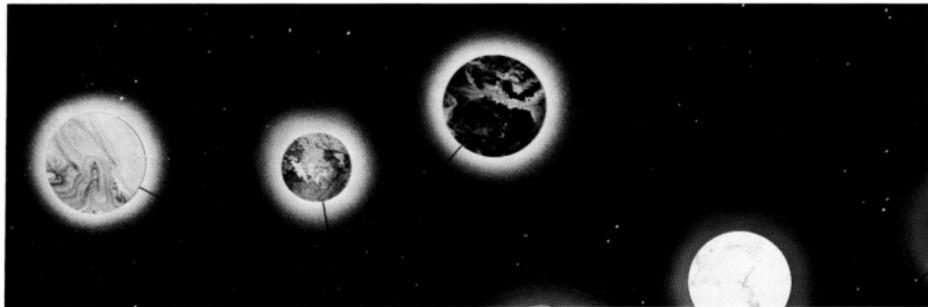
When Army Strength Points are defending in an hex containing a fort or fortress, the defending Player can choose to be outside or inside the fort or fortress. This is declared before the combat is resolved. If the Player chooses to be outside, the fort or fortress has no effect on combat. If the Player chooses to be inside, the combat strength of the fort or fortress is added to the defender's total. The combat strength of a fort is 4 points and the combat strength of a fortress is 6 points. An Inside Marker is placed on top of all units in the fort or fortress. The attacker now has the option to place the defender under siege. Siege is noted by moving the attacking units into the hex on top of the besieged force. The besieged pieces cannot be moved or receive reinforcements until the siege is ended.

A siege is ended when:

- The fort or fortress falls by siege or by storming attempt.
- The besieging force chooses to leave.
- The Strength Points of the besieging force are less than the combat strength of the fort or fortress alone. This combat strength does not include the Strength Points of any units in the fort or fortress.

A force under siege can still attack normally, but does not add the combat value of the fort or fortress to its Strength Point total when attacking.

The besieging Player can storm a fort or fortress during his COMBAT PHASE. A normal attack is executed. However, the combat value of the fort is added to



the defender's total.

A besieged fort or fortress can fall to siege at the end of besieged Player's COMBAT PHASE. One die is rolled. Crusader forts and fortresses will fall on a die roll of 1. Wersgorix forts and fortresses will fall on a 1-3. All Strength Points in a fort or fortress that falls are lost. All leaders are captured. One Equipment Point or IQ Point is immediately gained by the victorious Player.

A fort or fortress can be captured in the following ways:

- It falls by siege or storming attempt.
- All defending units are eliminated.
- As a result of the Treachery random event. If a treacherous leader takes command of a Crusader-controlled fort or fortress, the Wersgorix Player may freely move Wersgorix units into the fort or fortress. If Wersgorix units enter, all Crusader-controlled and treacherous leaders in the fort or fortress are captured at the end of the WERSGORIX COMBAT PHASE, and all treacherous combat units in the fort or fortress are eliminated at the end of the WERSGORIX COMBAT PHASE.
- The fort or fortress is unoccupied, in which case it can be freely entered by either side.

The Crusader Player marks captured forts and fortresses by placing a Castle Marker on them. The Wersgorix Player removes the Castle Marker when his forces capture the fort or fortress.

The victorious player can immediately occupy a captured fort or fortress with any units that took part in the attack. This is the only time units can advance after combat.

A **fortress** can never be destroyed, only captured. A **fort** can only be destroyed by Nuclear Attack.

E. NUCLEAR ATTACK

The Crusader Player can make a special Nuclear Attack once per turn. The Crusader Player announces which army or Garrison Marker is making a Nuclear Attack. This is a special form of ground combat. A unit that makes a Nuclear Attack cannot make a normal attack in the same Game Turn. A unit subjected to Nuclear Attack cannot also be attacked normally in the same Game Turn.

The Crusader Player rolls one die and compares the number to his current Equipment Point total. If the die roll is equal to or less than this total, the Nuclear

Attack has succeeded. The Wersgorix forces in the hex lose a number of Strength Points equal to the roll of two dice. The Crusader Player then lowers his Equipment Point total by 1, regardless of whether the Nuclear Attack was successful or not. Equipment Points are never collected for a successful Nuclear Attack.

The Wersgorix Player can remove the Strength Points from any army or Garrison Markers in the hex or can choose to destroy a fort if a fort is in the attacked hex. If a fort is destroyed, it satisfies all losses called for by the Nuclear Attack. Fortresses and Strength Points in them can never be affected by Nuclear Attack.



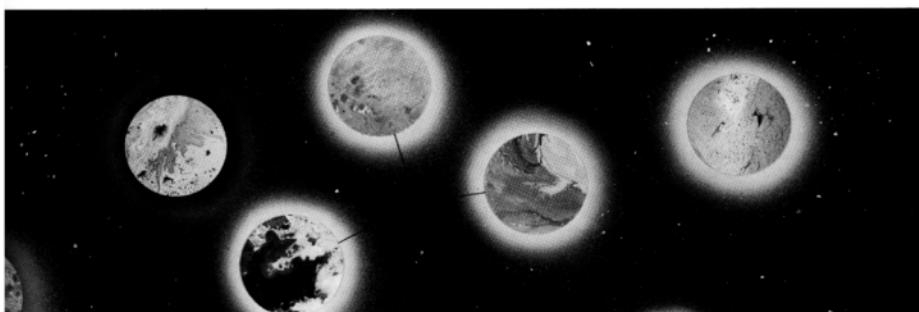
CONVERSION AND FIEFS

During the CRUSADE CONVERSION PHASE, the Crusader Player can attempt to Convert Thrall Races, causing them to join the Crusade against the Wersgorix Empire. The conversion attempt can require the Crusader Player to build churches or castles and always costs Equipment Points. After Converting Thrall Races, the Crusader Player must assign them to Crusader leaders as fiefs. Once a fief is assigned, the Crusader Player will gain Army Strength Points and possibly extra fleets and armies.

A. CONVERSION RESTRICTIONS

Thrall Races with a Crusader leader on the planet can be converted during the CRUSADE CONVERSION PHASE with the following restrictions:

- Thrall Races can be Converted only by Crusader leaders. Crusader Ally leaders cannot Convert Thrall Races.
- A Crusader leader must be on the surface of the planet. Only one conversion attempt can be made on any planet each turn, regardless of the number of Crusader leaders present on the planet at the time of the attempt.
- Brother Parvus can only attempt to Convert Thrall Races whose Attitude is Spiritual (S). If Brother Parvus is on a planet with an unknown Thrall Race, the Crusader Player can examine the piece. However, a conversion attempt can only be made if the Thrall Race is Spiritual or if there is another Crusader leader present.
- The hex occupied by the Crusader leader contains no Wersgorix fleets, armies, Garrison Markers, forts, fortresses, or leaders.



● The Crusader leader attempting the conversion cannot be at his Fief Limit for his current Title.

● The Crusader Player must have at least one Equipment Point for every Thrall Race he attempts to Convert (2 if the Thrall Race is Warlike).

The Attitude of the Thrall Race can create certain conditions which must be met for the conversion attempt to succeed. The Attitudes affect conversion as follows:

● Agrarian (A): No special conditions must be met to Convert the Thrall Race.

● Spiritual (S): Before the Thrall Race can be Converted, the Crusader must build a church or cathedral on the planet.

● Warlike (W): A castle must be built on the planet before the Thrall Race can be Converted. This condition will be satisfied if the Crusader forces capture an existing fort or fortress on the planet.

To build a church on a planet, the Crusader Player must have at least one fleet, army, or Garrison Marker unit, or Brother Parvus on the planet for an entire Game Turn. This piece cannot move or take part in any combats. A Church Marker is placed under the Thrall Race Marker to note that a church is under construction. At the beginning of the next CRUSADE CONVERSION PHASE, the Church Marker can be placed in any Crusader-occupied hex on the planet.

The procedure used to build a cathedral is the same as that for a church, except for the length of time. At the end of the first turn of construction, the Church Marker is flipped over to the side marked Cathedral. The construction process is repeated and at the end of the second turn, the Cathedral Marker is placed on the planet, as explained above.

To build a castle on a planet, the Crusader Player must have a Fleet, army, or Garri-

son Marker on the planet. Other than this, the procedure is identical to that of building a church.

B. HOW TO CONVERT

After the Crusader Player has determined which Thrall Races are eligible for conversion, he announces all conversion attempts he wishes to make. The Crusader Player can attempt to Convert none, some, or possibly all eligible Thrall Races, provided he has enough Equipment Points as explained above.

The Crusader Player rolls one die for each conversion attempt and modifies it by any of the following that apply:

ADD

- 2 If the Wersgorix Player has any pieces on the same planet.
- 1 If there are any Heresy Markers on the map.

SUBTRACT

- 1 If the Attitude of the Thrall Race is not Spiritual and the Crusader has built a cathedral on that planet.
 - 1 For every Equipment Point over 1 spent (over 2 if race is Warlike).
 - 2 If the Crusader currently has alliances with all three Independent Races.

If the modified die roll is greater than the Conversion Number of the Thrall Race, the attempt has failed. The piece is turned face down. If the modified die roll is equal to or less than the Conversion Number of the Thrall Race, the attempt has succeeded. The Thrall Race Marker is left face up. The Crusader Player must then immediately subtract 1 Equipment Point if the Converted race's Attitude is Agrarian or Spiritual. If the Attitude is Warlike, 2 Equipment Points must be subtracted. This subtraction is in addition to any Equipment Points spent to modify the die roll. The Equipment Points are spent

regardless of the outcome of the attempt.

C. ASSIGNING FIEFS

All Thrall Races Converted by the Crusader Player must be immediately assigned to a Crusade leader. This is done by placing the proper Fief Marker in the Thrall Race Box of the planet.

Every Crusader leader, except Brother Parvus, has a Fief Limit, as determined by his current Title (see E. below). No Crusader leader can ever have more fiefs than are permitted for his current Fief Limit.

If the planet is Converted by any leader other than Sir Roger, that leader's Fief Marker is placed in the Thrall Race Box.

If the planet is Converted by Sir Roger, the Fief Marker of any Crusader leader can be placed, at the Crusader Player's option. (Exception: Sir Roger's Fief Marker must be placed on the planet if a leader other than Sir Roger has been made King.)

If the planet is Converted by the King, the Crusader Player can place a Fief Marker of his choice on the planet.

As soon as a fief is assigned to a leader, the combat strength of the Thrall Race is immediately added to that leader's Army Strength on the STRENGTH TRACK. If the leader is not present when the fief is assigned, a Garrison Marker is placed underneath the Fief Marker. These points can be collected by the leader any time he lands on the planet.

Brother Parvus does not have Fief Markers, cannot lead Armies, and does not collect Army Strength Points. Each fief assigned to him is assumed to be part of the church property. All Army Strength Points gained from fiefs for Brother Parvus are lost. Brother Parvus has no Fief Limit; the Crusader Player can grant him

as many fiefs as desired.

Crusader Ally and Thrall Race leaders have no Fief Markers and cannot hold Fiefs.

If a converted Thrall Race Marker has an asterisk on its front, the Crusader Player has gained a fleet and army. The appropriate Thrall fleet, army, and leader pieces are placed on the map. To determine the strength of both the fleet and army, one Strength Marker is randomly drawn from the cup. This strength is noted on the STRENGTH TRACK. The marker is placed to the side and is not used for the rest of the game. No more than two Thrall Race fleets and 2 Thrall Race armies can be in play at any time. If the Crusader Converts another asterisked Thrall Race after all Thrall Race fleets and armies are in play, the Crusader Player does not gain anything for the newly Converted Thrall Race.

D. RECONQUEST

During the WERSGORIX COMBAT PHASE, the Wersgorix Player can attempt to regain control of any Converted Thrall Race. To regain control, the Wersgorix Player must have a Wersgorix leader on the planet. The Wersgorix Player rolls one die. This die roll is modified as follows:

ADD

- The combat rating of the Thrall Race.
- The number of Crusader or Crusader Ally Strength Points on the planet.
- 1 If the Thrall Race is Warlike.
- 3 If the Thrall Race has a fleet and army.

SUBTRACT

- 1 point for each I.Q. Point spent to modify the die roll.

If the die roll is less than or equal to the Wersgorix leader's Political Rating, the Thrall Race has been reconquered. The Thrall Race Marker is turned face down. The Crusader Player no longer controls the Thrall Race.

A Thrall Race can be Converted and reconquered any number of times. The Crusader gains Strength Points (or an army and fleet, if applicable) only the first time a Thrall Race is Converted. The Crusader Player does not gain additional Strength Points if the Thrall Race is Reconverted after being reconquered by the Wersgorix.

If a Converted Thrall Race is reconquered by the Wersgorix, the Fief Marker remains on the planet and the conquered

planet counts against the leader's fief limit. If the planet is reconquered by Crusader forces, the Crusader Player can reassign the fief to a different leader if he chooses.

E. TITLES

Crusader leaders can be granted Titles. Titles are of three kinds: Noble (Knight, Baron, Duke), Ecclesiastical (Archbishop, New Pope), and Royal (King). A Crusader leader can hold one Noble and one Ecclesiastical Title at the same time. A leader who holds the Royal Title cannot hold any other title. A leader's title determines how many Thrall Races the leader can hold as fiefs. A Crusader leader can hold a fief only if he has a Noble or Royal Title. (Exception: Brother Parvus does not need a Noble Title to hold fiefs). The number of fiefs that can be held by each title is listed below. The names in parentheses are the leaders who hold Noble Titles when the game begins:

Title	Fief Limit
King	Any number of fiefs
Duke	8 fiefs
Baron (Sir Roger)	3 fiefs
Knight (Sir Owain, Sir Fitz-William)	1 fief

Ecclesiastical Titles have no effect on a leader's Fief Limit.

Titles can be given if certain conditions are met. The conditions vary with the title given and are listed below:

Knight: The King (or Sir Roger if there is no King) can make any leader a Knight. Both leaders must be in the same area as a church during Step 2 of the FIEF ASSIGNMENT AND CRUSADE TITLE PHASE. A Knight Marker is placed in the CRUSADE LEADER TITLE BOX with the leader's name.

Baron: The King (or Sir Roger if there is no King) can invest any Knight with the title Baron. Both leaders must be in the same area as a church during Step 2 of the FIEF ASSIGNMENT AND CRUSADE TITLE PHASE. A Baron Marker is placed in the CRUSADE LEADER TITLE BOX with the leader's name.

Duke: The King can invest any Baron with the title Duke. Both leaders must be in the same hex as a cathedral during Step 2 of the FIEF ASSIGNMENT AND CRUSADE TITLE PHASE. The Duke Marker is placed in the CRUSADE LEADER TITLE BOX with the leader's name.

King: The New Pope can crown any titled Crusader leader King. All Crusader leaders must be in the same hex as a cathedral during Step 2 of the FIEF ASSIGNMENT AND CRUSADE TITLE PHASE. The Crown Marker is placed in the CRUSADE LEADER TITLE BOX with the leader's name.

Archbishop: The New Pope (or Brother Parvus if there is no New Pope) can proclaim another leader Archbishop. Both pieces must be in the same area as a cathedral during Step 2 of the FIEF ASSIGNMENT AND CRUSADE TITLE PHASE. The Archbishop Marker is placed in the CRUSADE LEADER TITLE BOX with the leader's name.

New Pope: An Archbishop can proclaim another Archbishop (or Brother Parvus) the New Pope. Brother Parvus does not have to be an Archbishop to receive the title of New Pope. Both leaders must be in the same area as a cathedral, during Step 2 of the FIEF ASSIGNMENT AND CRUSADE TITLE PHASE. The New Pope Marker is placed in the CRUSADE LEADER TITLE BOX with the leader's name.

A leader cannot grant more than one title per Turn, nor can he receive more than one title per Turn. A leader cannot grant any title in the same Turn that he receives any title.

Sir Roger loses the ability to grant titles if some other Crusader leader becomes King.

Brother Parvus loses the ability to grant titles if some other Crusader leader is given the title of New Pope.

Crusader Ally and Thrall Race leaders can never receive or grant titles or hold fiefs.

PART

9

ALLIANCES

During the CRUSADE ALLIANCE PHASE, the Crusader Player can try to make an alliance with an Independent Race. Such an alliance provides additional forces to be used against the Empire. During the ALLIANCE DISRUPTION PHASE, the Wersgorix Player attempts to break

existing crusader alliances. At the beginning of the game, all Independent Races are Neutral. No alliances are in force.

To form or break an alliance, the Player must have a leader on the home planet of the race the alliance attempt will be made with. Note that the Jair Race has two home planets.

During his ALLIANCE PHASE, the Phasing Player announces which leader on an Independent Race home planet will be used to make (if Crusader) or break (if Wersgorix) an alliance. One die is rolled and the leader's Political Rating is added to the die roll. If there is an Enemy leader on the planet when the attempt is made, the Political Rating of one Enemy leader is subtracted from the die roll. If the modi-

fied die roll is greater than or equal to the Alliance Range (printed on the map), the attempt is successful.

Brother Parvus cannot be used to form an alliance. However, if he is present with a leader attempting to form an alliance, Brother Parvus can add his Political Rating to the attempt, due to his translation ability.

If the Wersgorix Player makes an attack on an Independent Race home planet or attacks a Independent piece, that Race is permanently allied to the Crusaders. Such an alliance can never be broken.

If an alliance is made, the race is now a Crusader Ally. The Crusader Player can immediately place Crusader Ally pieces

on the Ally's home planet (or planets). The number of Strength Points that can be placed is equal to the result of one die roll.

placed on the map. Each turn the alliance is in effect, the Crusader Player can enter one die's roll worth of reinforcements during the Reinforcement Step. Crusader Ally pieces are controlled by the Crusader Player and can be used normally. The Crusader Ally leader is placed with any Crusader Ally piece.

If an alliance is broken, the Ally immediately becomes Neutral. No piece belonging to that Independent Race can be moved or take part in combat. The Crusader Player can attempt to reform an alliance with that Race.

PART

10

SCENARIOS

Regardless of the scenario chosen, the set-up instructions and game play are the same. The only differences between the scenarios are the Victory Conditions.

A. BASIC SCENARIO

The game lasts 15 turns. The units of both players are set up as given in PART 3. Victory conditions are checked at the end of Game Turn 15 to see who has won the game.

The Crusader Player wins by capturing the planet Wersgorix, or by capturing four of the other six capitals, or by converting nine Thrall Races. In order to win by converting Thrall Races, the Crusaders must have a King at the end of the game.

The Wersgorix Player wins by preventing the Crusader Player from achieving his victory conditions, or by eliminating all Crusader units and leaders.

B. CAMPAIGN SCENARIO

The game lasts 30 turns. Both players' forces are set up as given in PART 3. The victory conditions are checked at the end of Game Turn 30 to see who has won the game.

The Crusader Player wins by controlling

all capitals on the map or by converting 14 Thrall Races. In order to win by converting Thrall Races, the Crusaders must have a King at the end of the game.

The Wersgorix Player wins by preventing the Crusader Player from fulfilling his victory conditions, or by eliminating all Crusader units and leaders.

The piece is flipped over to show the leader's wounded side. If on the wounded side already, the leader has died and is removed from play. Note: Wounded leaders have lower combat and political ratings.

Earth: The Crusaders have learned the general location of Earth. One Crusader (not Crusader ally) leader must be removed from play during the CRUSADE MOVEMENT PHASE, along with at least one Fleet Strength Point. The leader is placed on the GAME TURN/EQUIPMENT TRACK. Beginning with the next turn, the Crusader Player can roll one die at the start of the CRUSADE MOVEMENT PHASE. If a 5 or 6 is rolled, the leader (without any Strength Points) is returned to play at Thriaxian. Each turn after this, the Crusader Player will lose 1 Fleet Strength Point at the beginning of each CRUSADE MOVEMENT PHASE. This random event can occur only once. All subsequent rolls of this event are treated as No Event.

Reinforcements: The Crusader Player immediately rolls one die and enters the number rolled as Strength Point reinforcements. These reinforcements represent captured ships, converts, allies, and mercenaries. The reinforcements can be used as either fleet or army Strength Points. They enter using the same method as normal reinforcements.

Ally Becomes Neutral: One Crusader Ally immediately leaves the Crusader alliance. If there are no Crusader Allies, this is treated as No Event. If there is more than one Crusader Ally, the Crusader Player has his choice of what ally will leave the alliance. The units of that race cannot be moved until the alliance

PART

11

RANDOM EVENT EXPLANATIONS

At the beginning of each Game Turn both Players determine what their random event (if any) for the Turn will be. The results of a random event dice roll can never be voluntarily ignored by either Player.

A. CRUSADE RANDOM EVENTS

Leader Falls III: One Crusader leader has become ill. To determine the leader, immediately roll one die and find the result:

- 1 — Sir Roger
- 2 — Sir Owain
- 3 — Sir Brian
- 4 — Brother Parvus
- 5 — Red John
- 6 — Roll again



is reformed. No more Strength Points are gained as reinforcements from that race until the alliance is reformed. An alliance is reformed by following the same procedures as those for forming an alliance as given in PART 9.

Grail: The Crusaders have heard rumors of the Holy Grail. The Wersgorix Player immediately places the Grail piece on any planet not occupied by Wersgorix- or Crusader-controlled pieces. The Grail piece can be taken and carried by any army or fleet. The Grail piece can be transferred from one unit to another if both units end the Turn in the same hex. When a Crusader leader reaches the Grail piece, the Crusader Player rolls one die; if the result is 1 or 2, the Grail is real; any other number indicates the Grail was a false rumor. If the Grail is only a rumor, the Grail piece is immediately removed from play. The True Grail will give a 1 column shift (for both fleet and army combat) to all combats fought by the Crusader-controlled force possessing the Grail. The True Grail can be captured from the enemy in the same manner as a leader. The True Grail can never be destroyed. Once the Grail piece has been placed on the map, treat all further rolls of this event as No Event.

Crusading Fervor: The Crusaders, intent on crushing the Wersgorix, work themselves into a religious fury. During the CRUSADE COMBAT PHASE, all attacks are shifted 1 column to the right. Brother Parvus cannot be used to give a column shift when Crusading Fervor is in effect. Crusading Fervor lasts one turn.

Ionic Storm: An ionic storm enters the map. One die is rolled to find the entry point. An Ionic Storm Marker is placed on the Ionic Storm Entry Hex matching the number rolled. One die is rolled for the direction of the storm and is compared to the direction indicator on the map. The storm will move in that direction a number of hexes equal to one die roll. If the storm leaves the map it is removed from play. In Step 6 of the REINFORCEMENT AND RANDOM EVENTS PHASE the direction and distance is determined again.

An ionic storm affects the hex it is in and all hexes it is adjacent to. No fleet can enter an area affected by an ionic storm. Fleets in an ionic storm's area of effect cannot be moved.

Heresy: A Converted Thrall race, chosen by the Wersgorix Player, has an outbreak of religious heresy. A Heresy Marker is placed immediately on the planet. At the beginning of each REINFORCEMENT AND RANDOM EVENTS PHASE, a check is made to see if the heresy spreads. All other conversion attempts suffer a +1 penalty to the die roll as long as any Heresy Marker is in play. A Heresy Marker can be removed by building a cathedral on the heretical planet or by attacking the Thrall Race on the planet (if a cathedral is already built). Any attack resulting in a Defender loss will remove the Heresy. A heretical planet remains under Crusader control, but does not satisfy any Scenario Victory Conditions. If the Wersgorix Player attacks forces on a heretical planet, the Heresy Marker is removed and the planet returns to Converted status before the combat is resolved. If there are currently no converted Thrall Races, treat this as No Event.

Treachery: One Crusader leader (other than Sir Roger and Brother Parvus), or a Crusader Ally leader goes over to the Wersgorix side for one turn. The leader is chosen by the Crusader Player during the REINFORCEMENT AND RANDOM EVENT PHASE. The treacherous leader is controlled by the Wersgorix Player that Turn. The treacherous leader moves and fights as if it were a Wersgorix leader. If the treacherous leader is stacked with any Crusader combat units or moves through a hex containing only Crusader combat units, it can move those units normally. If there is another Crusader or Ally leader in the hex, a Command Dispute results. If there is a Command Dispute, the Wersgorix Player rolls one die. If the roll is less than the treacherous leader's Political Rating, the treacherous leader has assumed command of all combat units in the hex. If the roll is equal to or higher than the Political Rating, the loyal Crusader leader has assumed command. If the treacherous leader takes command, the Wersgorix Player can use the treacherous leader and troops just as if they were his own units. Regardless of who wins a Command Dispute, the losing leader moves and functions normally for the side that controls it.

Ambassador: A diplomat from a neutral Independent Race arrives at Sir Rog-

er's camp. During the CRUSADE ALLIANCE PHASE, the Crusader Player can attempt to form an alliance with the Independent Race, using the procedure given in PART 9. The Crusader Player has the choice of which Independent Race the diplomat is from. If the Crusaders currently have alliances with all Independent Races on the map, treat this as No Event.

B. WERSGORIX RANDOM EVENTS

Withdrawal: The Wersgorix Player must immediately remove from play a number of Strength Points equal to the roll of one die. The points can be removed from any fleets, armies, or Garrison Markers on the map. The appropriate adjustments are made on the STRENGTH TRACK. If points are removed from an Garrison Marker, the marker is replaced by a new one to reflect the new strength. If any unit is reduced to a strength of 0, that unit is eliminated.

Reinforcements: Wersgorix forces have received Strength Points from other parts of the Empire. One die is rolled. This is the number of Strength Points the Wersgorix Player receives. All reinforcements enter immediately at the planet Wersgorix. The Wersgorix Player can add these points to existing fleets or armies that are on Wersgorix, create new fleets or armies, or place a Garrison Marker on the planet. If necessary, fleet strength can be taken as Uncollected Strength Points.

Rebellion: One Thrall Race of the Crusader Player's choice Converts. The Thrall Race piece is flipped to its converted side during the REINFORCEMENT AND RANDOM EVENTS PHASE. No Fief Marker is placed. When a Crusader leader lands on the planet, his Fief Marker is placed on the planet and the Strength Points of the Thrall Race are added to his army. This random event does not require the Crusader Player to expend Equipment Points or to build a castle or church, regardless of the Attitude of the chosen Thrall Race.

Lies: The Wersgorix have learned some new information about the Crusaders. They are all genetically superior aliens who breed for ferocity in battle and have mental control over their bodies. Because of this misinformation, the Wersgorix Player loses 3 IQ Points. These points are subtracted immediately.

Initiative: The Emperor realizes the Crusaders might be a threat to the ultimate survival of the Empire. During

WERSGORIX ALERT PHASE, the Wersgorix Player can play one extra Alert Marker. If all planets are already alerted when this event is rolled, treat this as No Event.

Earth: The Empire has learned the location of Earth. During the WERSGORIX MOVEMENT PHASE, the Wersgorix Player gains 1 I.Q. Point for every 5 Fleet Strength Points he removes from play. This can be done only during the WERSGORIX MOVEMENT PHASE immediately following the REINFORCEMENT AND RANDOM EVENTS PHASE in which this result was rolled. This event can occur only once; if it is rolled again, treat it as No Event.

PART

12

CRUSADER COMBAT RESULT EXPLANATIONS

Results listed in the CRUSADER COMBAT TABLE are in pairs. The result to the left of the slash (the number) applies to fleet combat, and to the right of the slash (the letter) to ground combat.

FLEET COMBAT

1. Your fleet gets lost due to bad navigation and never finds the enemy. Roll one die and move your fleet(s) in the direction shown on the IONIC STORM MOVEMENT INDICATOR that corresponds to the roll. The fleet(s) end their move when they reach a hex on a different planet. If the direction rolled would take the fleet(s) off the map without reaching any planet, the fleet(s) do not move. No combat takes place.

2. Your navigators are poorly trained and you came into the combat area too fast. You lose 2 Strength Points and the enemy loses 1.

3. The battle area is a maze of asteroids and chunks of rock. Roll one die to see which side had worse navigators (1-3 Wersgorix; 4-6 Crusader). The unfortunate Player rolls one die and adds 2 to the result. The final total is the number of Strength Points destroyed.

4. You outfit your crews and knights in

spacesuits and send them into space. In a surprising move, they blow open the enemy hulls with bombs and board the enemy to fight hand-to-hand. The Wersgorix, unprepared, suffer badly. Roll two dice to find the number of Enemy Strength Points lost.

5. The battle is an inconclusive standoff. Each Player loses 1 Strength Point. However, during the delay someone managed to affect the nearest Alert Satellite. If the satellite is Off, it is immediately turned On. If it is On, it is immediately turned Off. Planets in a Defense Zone whose Alert Satellite was turned On become alerted, if they are not alerted already. All planets in a Defense Zone whose Alert Satellite was turned Off become unalerted.

6. You take a gamble and try a tactic you heard was used by galleys — ramming. Each Player rolls one die to find the number of Strength Points he loses.

7. The battle was a trap. Roll one die to see if you escaped the trap in time (1-3 No; 4-6 Yes). If you were trapped, you lose Strength Points equal to the roll of two dice. If you escaped, the enemy loses Strength Points equal to the roll of one die.

8. Your fleet(s) arrived scattered and at different times. Roll one die to find the number of Strength Points you lose.

9. Inexperienced in the hazards of space, you arrive just as an ionic storm appears. Place an Ionic Storm Marker in the hex you are in. No combat can occur.

10. By parleying over the farspeaker, you manage to convince the Wersgorix that you are really a super-race and have a death weapon. Disheartened, they fight feebly and with no spirit. Roll two dice to find the number of Enemy Strength Points lost.

GROUND COMBAT

A. The priests rouse your men into a fighting fury by preaching about the perils of damnation if the godless Wersgorix are not defeated. The Wersgorix lose one Strength Point for every 2 Strength Points you are attacking with.

B. You try a strange enemy bomb. A huge fireball is the result. Roll one die to see if it explodes in your camp or his (1-3 Crusader; 4-6 Wersgorix). Roll two dice to find the number of Strength Points eliminated.

C. Your newly-captured weapons run out

of power. The Wersgorix launch an immediate counter-attack. You lose 1 Strength Point for every 3 defending Wersgorix Strength Points.

D. The leaders of each side hold a parley. Through bravado and guile, you manage to arrange a truce. No combat occurs.

E. Your archers fill the sky with arrows. Although the arrows are not very accurate, the Wersgorix have no armor to protect themselves. Roll one die to find the number of Wersgorix Strength Points lost.

F. The Wersgorix troops have set up a camp gleaming with strange equipment and powerful-looking engines. During the night your men become afraid. The attack the next morning is half-hearted and weak. You lose a number of Strength Points equal to the roll of one die.

G. You order your men to make a show of brazen courage and strength before the battle. Dressed in the best clothes, prancing your horses, and shouting fierce battle cries, you terrify the Wersgorix troops with your blood-thirstiness. When the attack comes, they panic and run. Your knights gallop out and ride them down, taking many prisoners. The Wersgorix Player loses 1 Strength Point for every 3 Strength Points you attack with.

H. During the night, you prepare covered pits, ramparts, chevaux-de-frise, and barricades. In the morning, you goad the Wersgorix into attacking you. They advance and fall into your traps. Roll one die and add 3 to find the total number of Enemy Strength Points lost.

I. Your knights, bored by inaction, decide they can deal with these paynim. They recklessly charge the enemy. As they charge, the enemy line wavers. Roll one die to see if the knights are successful (1-3 No; 4-6 Yes). If successful, the enemy loses a number of Strength Points equal to the roll of one die. If unsuccessful, you lose a number of Strength Points equal to the roll of one die.

J. In an attempt to force the enemy to surrender, you order your men to drive a wedge through their lines and capture their leader. You lose 3 Strength Points doing so. The enemy loses a number of Strength Points equal to the roll of one die. If the enemy's losses are greater than yours, you have wounded the enemy leader. If there is no enemy leader present, you were tricked into thinking there was one. No Friendly leaders are hurt.

THE HIGH CRUSADE™ RULES 16

THE HIGH CRUSADE™ Game Counter Section (200 pieces) Back

Quantity of Sections of this item per type in game: 1. Total quantity of items per type in game: 1. Total quantity of items per game: 1.

SIR ROGER WD 3 2 2	SIR K DWAIN FTZ WLM 1 0	SIR K FTZ WLM 1 0	RED JOHN WD 1 1 0	BROTHER PAVUS WD 1 1 0	12 FLEET A	8 FLEET B	8 FLEET C	6 FLEET D	6 FLEET E
6 FLEET F	6 FLEET G	6 FLEET H	6 FLEET I	EQUIP PTS	FLEET STR A	FLEET STR B	FLEET STR C	FLEET STR D	FLEET STR E

G 7	G 5	G 5	G 3	G 3	G 3	G 2	G 2	G 1	G 1
WERSG. UNC PTS	ALERT SAT	WERSG. LEADER							

FLEET STR F	FLEET STR G	FLEET STR H	FLEET STR I	ROGER	ROGER	ROGER	ROGER	ROGER	ROGER
ROGER	ROGER	DWAIN	DWAIN	OWAIN	OWAIN	OWAIN	OWAIN	OWAIN	OWAIN

WERSG. LEADER									
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CHURCH	CHURCH	CHURCH	CHURCH	CHURCH	CHURCH	KNIGHT	KNIGHT	BARON	KING
NEW POPE	ARCH BISHOP	ARCH BISHOP	CASTLE						

FLEET E	FLEET F	FLEET G	FLEET H	FLEET I	FLEET J	FLEET K	FLEET L	FLEET M	FLEET N
FLEET STR E	FLEET STR F	FLEET STR G	FLEET STR H	FLEET STR I	FLEET STR J	FLEET STR K	FLEET STR L	FLEET STR M	FLEET STR N

CASTLE	CASTLE	3	5	6	7	8	9	1	3
ALERT	ALERT	ALERT	ALERT	ALERT	ALERT	ALERT	ALERT	HOLY GRAIL	GAME TURN

FLEET STR O	FLEET STR P	FLEET STR Q	FLEET STR R	FLEET STR S	FLEET STR T	FLEET STR A	FLEET STR B	FLEET STR C	FLEET STR D
3 A	3 W	2 W	3 A	1 S	3	4 A	4 A	1 I	5 S

ALERT	ALERT	ALERT	ALERT	ALERT	S. SON VAN	ETHEL BERT	P. THING FLEET A	P. THING FLEET B	THRALL LEADER
JAR FLEET A	JAR FLEET B	JAR FLEET C	JAR FLEET D	JAR FLEET E	JAR FLEET F	JAR FLEET G	JAR FLEET H	JAR FLEET I	JAR FLEET J

2 A	6 A	5 A	8 W	0	2	ASHENK LEADER	ASHENK FLEET A	ASHENK FLEET B	ASHENK FLEET STR
2	4	3	5	1	0	2	2	2	6 S

G 1	G 1	G 2	G 2	G 3	G 3	G 5	G 5	G 7
WERSG. LEADER WD 2 2 2	ALERT SAT							

ARMY Q	ARMY R	ARMY S	ARMY T	WERSG. LEADER WD 1 0 1	WERSG. LEADER WD 1 0 0	WERSG. LEADER WD 1 0 0	WERSG. LEADER WD 0 0 0	WERSG. LEADER WD 0 0 0	WERSG. LEADER WD 0 0 0
ARMY STR E	ARMY STR F	ARMY STR G	ARMY STR H	ARMY STR I	ARMY STR J	ARMY STR K	ARMY STR L	ARMY STR M	ARMY STR N

ARMY Q	ARMY R	ARMY S	ARMY T	ARMY A	ARMY B	ARMY C	ARMY D	ARMY E	ARMY F
ARMY STR G	ARMY STR H	ARMY STR I	ARMY STR J	ARMY STR K	ARMY STR L	ARMY STR M	ARMY STR N	ARMY STR O	ARMY STR P

ARMY Q	ARMY R	ARMY S	ARMY T	ARMY A	ARMY B	ARMY C	ARMY D	ARMY E	ARMY F
ARMY STR G	ARMY STR H	ARMY STR I	ARMY STR J	ARMY STR K	ARMY STR L	ARMY STR M	ARMY STR N	ARMY STR O	ARMY STR P

THRALL RACE	THRALL RACE	THRALL RACE	THRALL RACE	ARMY STR A	ARMY STR B	ARMY STR C	ARMY STR D	ARMY STR E	ARMY STR F
THRALL RACE									

THRALL RACE									
THRALL RACE									

ASHENK STR A	ASHENK STR B	ASHENK STR C	ASHENK STR D	ASHENK STR E	ASHENK STR F	ASHENK STR G	ASHENK STR H	ASHENK STR I	ASHENK STR J
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P. THING UNC PTS									
P. THING UNC PTS									

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HERESY									

■ MINIATURES ■

by Kim Eastland

ASGARD MINIATURESDistributed by the Armory
4145 Amos Ave.
Baltimore, MD 21215

Pictured: Space Marine Figure Line / Shock Trooper with Force Axe; Large Sadistic

Demon Line / Dragon Lizard, SF Rider.

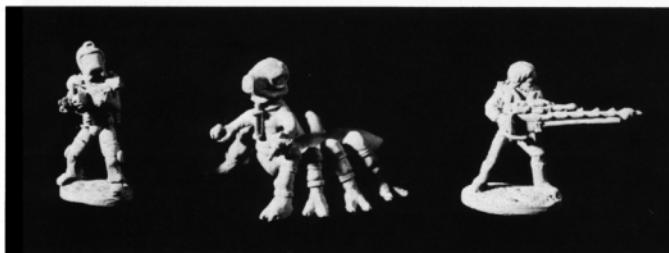
When looking for light, medium, or heavy futuristic battle armor, one need look no further than Asgard Miniatures. The detail and imagination that goes into each figure is amazing. The line is also available in 25 mm and 15 mm sizes. The Large Sadistic

Demons are evolved bipedal, four-armed dinosaurs and are wonderfully unique.

the mount shown (far right) is the only passive one in the lot, and the rider is holding a power gun aloft. Suggested retail price: 25 mm Shock Trooper: \$1.00.

Dragon Lizard: \$4.00.

Dragon Lizard Rider: \$1.20.

**TABLE TOP MINIATURES**

Laser Burn Miniature Line

Manufactured in the U.S. by Ral Partha
5938 Carthage Ct.

Cincinnati, OH 45212

Pictured: Imperial Bodyguard, Imperial Marine Officer, and Adventurer in Space Suit. Sculptor: Bryan Ansell. These 15 mm figures usually come 12 to a blister, with some blisters containing fewer but larger figures, like vehicles. An array of high tech propulsion units, weapons, and devices are sculpted wearining tiny little suits of great detail. Most of the suits are different, and the officers have just enough "pomp" about them to make them believable. There are 26 different blister packs in the line. Suggested retail price: \$4.50 for normal packs, \$8.00 for the larger figures and vehicles.

**TSR, Inc.**

POB 756

Lake Geneva, WI 53147

STAR FRONTIERS™ Metal Miniatures Line. Pictured: Human in Power Armor, Vrusk with Weapon, Explorer. TSR, Inc., starts off its science-fiction line with characters for use in the STAR

FRONTIERS role-playing game. The first Yazarians, Humans, and the hated Sathar armed and armored in various high tech fashion. Future plans for this line include starships for the STAR FRONTIERS Knight Hawks game, and more characters and monsters. This 25 mm figure line is suitable for use with all science-fiction role-playing games. Suggested retail price: \$10.00 per set.

SSR



RETURN OF THE STAINLESS STEEL COMPUTER



by Ken Ramstead

The bulkhead wall was still smoking from my cutlaser as I pranced through the breach I had made to the corridor that led to the comproom. No one in sight. Good. The worst was behind me now, that awful feeling of uncertainty I always got when I hit a space station. What lies behind the next door? A docile taco-jockey or a vicious hired gun bot? Would the next room contain a vacuum trap or a paternity rap? You never knew what to expect so you had to be ready for anything. But I had survived, albeit with a leg wound and minus the good slug thrower that my lovely Angelina had presented me on our anniversary (she had always been the romantic of the family). I had survived; slippery Jim DeGriz, the Stainless Steel Rat who had saved the galaxy at least twice, was at the end of another successful mission. Ah, I could almost count the two million credits in the palms of my hot little hands already. Staring me in the face was the only certain factor in this whole uncertain intergalactic chamber of horrors. All else might be unknown. But not the computer room. I knew what to expect from the Mark 2500.

As I approached the comproom door, I patted the botslaver slung at my side for good luck and brought the cutlaser up to firing position. Before I took the last door into the room, I rested a bit, fixing up my leg wound with the first aid kit I carried, and increasing my alertness rating with a fifth of scotch while I was at it, for good measure. The 5-1 odds I knew I would have to face would be considerably shortened now. Not that the Stainless Steel Rat needs to tamper with the odds. All I did was use Paragraph 075 to advantage.

The door opened with ridiculous ease. Even the twins could have cracked this nursery pen. I rushed in, botslaver at the ready, prepared to deal with any conglomeration of dust-collecting rust-buckets the 2500 could throw at me. This was going to be a cin . . . what the? Instead of confronting all five clanking metal morons, my gaze was met by a smoke-filled room, nullifying my botslaver and rendering my cutlaser inoperative. And out of that smoke-filled chamber came a hail of gunfire . . . coming from the Mark 2500 itself! As I dove for the floor, my arm shattered by a slug burst, I ruefully reflected on how a vital bit of information such as the upgrading of the Mark 2500 had missed the SPI rulebook. . . .

The Return of the Stainless Steel Rat.

from ARES™ Magazine issue #10, is one of the better ARES Magazine games to have come out for a long while, eminently suitable for solitaire play as well as lending itself to the competitive atmosphere of a two-player game. The Return of the Stainless Steel Rat never fails to award the player with a whole new adventure with every sitting.

Oddly enough, though, for a game whose unexpected situations are a major factor in its popularity, the end game is almost anti-climatic. Unless the intruders have been unreasonably unlucky, they will always survive the computer room combat.

The following addition to the game system is designed to circumvent this, and give that final battle the zing it deserves.



(16.0) Deactivating the computer and winning

Cases:

(16.1) Deactivating the computer

(16.1) The computer is located in box B216. When your character enters this box, roll a die and match the result to the following paragraph number.

Die Roll Cases

1 You have entered the computer room, which you find to be smoke-filled. Three slug-throwers have been installed in this Mark 2500, which you must first put out of action before you deactivate the computer.

2 As you enter the computer room, darkness envelops you. But it cannot shield you from the three laser pistols installed in this Mark. The Mark 2500 attacks first, of course.

3 Surprise! The computer room has no implanted devices to impede you from deactivating it.

4 The Mark 2500 that you are facing has been installed with an anti-robot slaver device which renders your own Robot Slaver utterly ineffective against the three Bouncers attacking you from the rear far inward, rear middle inward and rear near inward positions. The robots attack first.

5 As you enter the room, you trip an electrical sensor which detonates four Gas grenades, which you must survive before you take on the three hired guns rear far inward, rear middle inward and rear near inward positions) stationed to protect the computer. The robots attack first.

6 You enter a vacuum-filled computer chamber! Or you almost enter it if you do not pass an Alertness Check. Unless you have a functioning suit at hand, you will not be able to enter the computer room to deactivate the computer. Tough luck, Jim. You had better rustle up a suit somewhere if you want to collect that cool two million credits.

In all cases, you deactivate the computer by simply stating that you are doing so.

In all cases the computer is assumed to occupy the middle of the Tactical Display while Jim, Angelina and any hangers-on enter the room through the Front Far Box. The computer controlled weapons in cases 1 and 2 fire in unison at the target closest to the center of the Tactical Display. In the event of two or more characters or beings occupying the same circle, the being or character with the lowest Alertness Rating will be automatically attacked. In the case of a tie, flip a credit. Likewise the robots in cases 4 and 5 will always move against and attack the character or being with the lowest Alertness Rating.

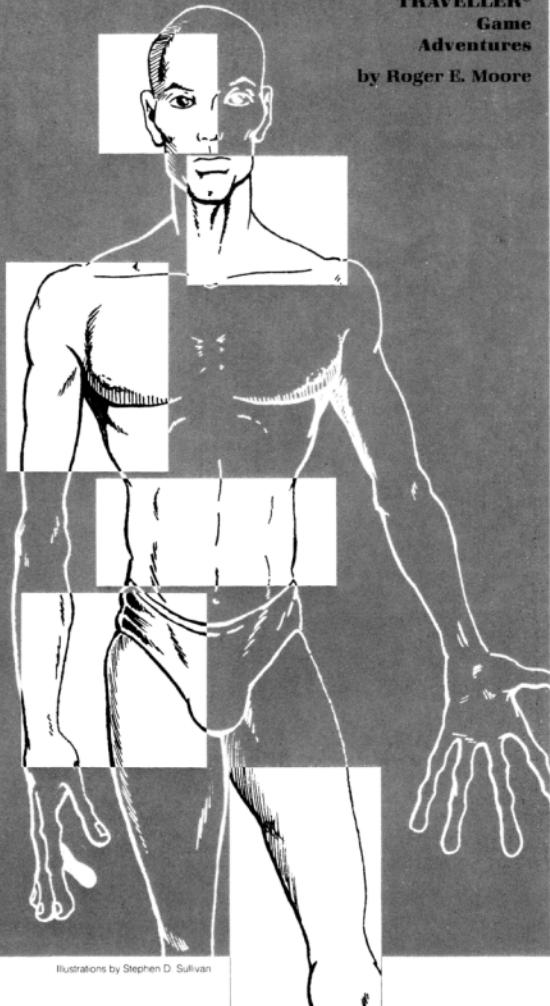
The Mark 2500 does not hinder movement or block fire. And although the center of the Tactical Display can be occupied by characters or beings, the computer cannot be deactivated until its safeguards are disposed of.

Good luck, all you Stainless Steel Rats out there! ▲

CREATING A L I E N RACES

for
TRAVELLER®
Game
Adventures

by Roger E. Moore



Illustrations by Stephen D. Sullivan

As TRAVELLER game referees develop their campaigns, wherever they may be located in the galaxy, the desire may appear in time to create new alien races for the players to encounter, interact with, and possibly run as characters. Alien races require considerable attention on the referee's part to make them consistent and playable within the game system; it doesn't do to produce a bug-eyed whatsit with a blaster and call it a viable alien being.

Judges Guild, Inc. has produced a series of sector maps for TRAVELLER game adventures, collectively known as the Gateway Quadrant, set in GDW's Imperium. The Gateway Quadrant contains many small interstellar nations bordering the trailing edge of the Imperium, a number of which are dominated by both alien and variant human races. One of the most notable of the human-descended "alien" races is that of the Sydymites, who are briefly described in the booklet on the Ley Sector. The Sydymites command their own subsector-sized empire, and are essentially unfriendly toward the Imperium; concerns about invasions from and border incidents with the Sydymic Empire run strong in that end of the Imperium and the Sydymites generate considerable influence (though of a negative quality) within the sector as a whole.

As an example of how a TRAVELLER game referee can go about detailing new races for use in game adventures, the Sydymite people are described below with the kind permission of Judges Guild, Inc. The description contains the physical appearance of the Sydymites, notes on their history, society, government, and military, and finally, how they may be used as player characters or NPCs within a TRAVELLER game campaign set in the Ley Sector. They may, of course, be adapted into other TRAVELLER game universes and campaigns as desired.

Sydymites ***Homo sapiens sopateri***

The Sydymites are a minor human race from the Sydymic Empire subsector of Ley Sector, Gateway Quadrant. Their ancestors were apparently transplanted

from Terra to Sopater (A-567899B-N) some 300,000 years ago by the Ancients, and since then have adapted to their homeworld's lower gravity. Named for Sydym, the major industrialized continent on Sopater, these people are quite tall and thin, averaging 2.4 meters in height and 200 kg. in weight. Skin tone ranges from pale olive to sandy brown; eye and hair colors are gray, brown, or black. Sydymites have very thin, sparse hair, and most males are completely bald; many females develop bald spots on their crowns and upper foreheads. Their joints are enlarged in appearance and they have broad feet, giving them a somewhat knobby look, though they are not unattractive. Sydymites tend to suffer from spinal, arthritic, and circulatory disorders because of their size, and they prefer to colonize smaller, low-density worlds with low gravities. Though Sydymites are infertile with other races of humanity, they strongly prefer to have children only among their own people.

History

Contacted by Solomani military forces in -2174 Imperial, the Sydymites' TL 2 world culture was severely disrupted. At first the smaller Solomani humans were believed to be gods, and this was played upon by the fleet admiral and his staff. Time, however, told the truth and the Solomani were found to be no better, and in some ways worse, than the Sydymites themselves. Their cultural heritage and traditions eroded under the poorly restrained contact the Solomani made with them, and their self-image was shattered by their classification as a "minor" race, unimportant in the affairs of interstellar life. Despite differences between the two races, active recruiting of Sydymites into the military, technical, and trade forces of the Solomani Rule of Man grew over many years. Nicknamed "stilts," the Sydymites became a common sight across their subsector and neighboring ones as well.

As the fabric holding the Rule of Man together began to unravel, so did the ties binding the Sydymites to the Solomani empire. Economic difficulties produced minor uprisings throughout their home subsector from -1800 Imperial on; with the mutiny aboard and hijacking of a Solomani heavy cruiser, the unrest turned into a full-scale war. Weakened and demoralized by the fading contact with the rest of the galaxy, the Solomani forces withdrew to spinward, where they joined other refugees of the col-

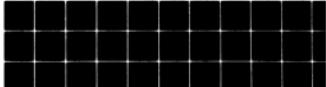
lapse and formed the Matarishan Federation. Sopater declared itself an independent world in -1772 Imperial, and using captured starships, was able to lay claim to several nearby worlds and establish the Union of Sydymic Worlds. Most of the Solomani humans in the area were permitted to leave or were forcibly deported, but a few were allowed to remain instead. As of the 1100 census, Solomani-descended humans made up about 7% of the population of the Sydymic Empire.

Over the next two thousand years the Sydymites were left alone, and they became pre-occupied with maintaining their technological expertise and establishing new colonies in their subsector. The collapse of the Rule of Man did considerable damage to their tech levels, and it was with difficulty that they were able to keep their interstellar network operating. Slowly they began to establish a new culture, managing to eliminate much of what they considered "alien" and retaining many of their older traditions.

This period came to an end in 389 Imperial, when a scout ship from the Third Imperium discovered a Sydymite colony and was fired upon. Further incidents broke out as the Sydymites, who had never forgotten the Rule of Man, tended to fire first at unfamiliar ships and ask for identification later. Sporadic fighting carried on for two hundred years without major gains or losses on either side. During the Imperial Civil War (604-622 Imperial) the Imperium withdrew most of its forces from the area and fighting fell into a lull. Taking advantage of this quietude, a Sydymic naval admiral had himself elected governor of the Union, and set about restructuring the democratic federation into a constitutional monarchy. The change had little effect on the governing of the Sydymic worlds (now called the Sydymic Empire) as both forms of government were heavily laden with bureaucracy. It was not difficult for Hadzinja, the new regent, to gain the support of the populace for his policies, as they greatly feared being absorbed into the Imperium and dominated again.

When the Imperial forces gradually returned to the area, they faced an even more determined opponent than before and the undeclared war faded out entirely. The five hundred years since the establishment of the Sydymic Empire have been characterized by warfare with the Sultanate Al Amya (the nearest empire to trailing), by continued consolidation of the worlds in the

Empire, and by expansion coreward. Increases in tech level overall have been hampered by the government's emphasis on bringing all Sydymic worlds onto



a technological par with one another before further research is permitted. The coreward frontier consists almost entirely of underdeveloped worlds, and they are believed to be weakly held and likely to be abandoned if the forces there are required elsewhere.

A truce of sorts has been in effect with the Imperium since the 800's Imperial, but border incidents and provocations are common. Raids on merchant shipping and commando-style strikes at military targets and ships have become almost routine. The current Sydymic regent, Nalond-ja, has made it clear that the Sydymic Empire does not feel constrained to recognize claims made by other interstellar states upon worlds within their own subsector or the Outworlds subsector to rimward. Further conflicts with the Imperium on a major scale are not anticipated, though minor incidents such as the above will likely continue indefinitely: conflicts with independent stellar states to coreward and to rimward are also possible and perhaps inevitable. The most serious threat may come from the Sultanate Al Amya to trailing, as that state seems to be preparing for a general *jihad* against other neighboring states to trailing from it, and the conflict may spill over into the Empire's subsector.

Society and Government

The Sydymites are a cohesive and purposeful people, welded together by strong cultural pride and distrust of all neighboring interstellar states. Their society reflects a sort of military spartanism, discouraging extravagance and aiming for simple, functional designs. Personal gain is neither important or unimportant, though consideration of the welfare of the state and its people comes first and heroism is encouraged. Citizens of the Empire are very law-conscious, and seem quite accepting of the restrictive nature of their society and government. Ownership of nearly all forms of weapons is prohibited, except to military and law enforcement personnel; however, provision is made in case of world invasion for the rapid distribution of weapons to the public and the organization of militia units

whenever possible. For traditional reasons, it is permissible for anyone to own a blade or dagger weapon, particularly a .3 meter long blade weapon of a style used by the Sydymites just prior to their conflict with the Solomani.

Though called an empire, the Sydymic government is better described as an insulated bureaucracy having only limited and indirect interactions with the populace. The powers of the regent are circumscribed by the constitutional charter drawn up when the Empire was formed upon the death of the old regent, a new one is elected by a council of leaders from worlds with populations in excess of one million. Individual world governments are simply identical extensions of the interstellar government on Sopater, and manage affairs down to the city level. Though the citizens of the Empire may have little individual say in the workings of their government, they seem satisfied with it and support its policies, particularly with respect to the Imperium and neighboring states.

Military

It has been mandatory for centuries for all able-bodied males to serve at least one term in some form of military service; enlistment is voluntary for less healthy males and for all females. Planetary forces (including the army, wet navy and air forces) are the largest in terms of manpower, but the space navy, marines, and border patrol command more prestige and political "pull." The border patrol is roughly equivalent to the Imperium's Scout Service, and is engaged in world exploration and some degree of military spying. If necessary, the Empire can draft planetary army personnel into the marines with abbreviated training, replacing the army personnel from the vast militia pools.

The Sydymic Empire hires no mercenaries of any kind, and no such forces will be found within their empire. The regent in theory has command over all forces, though will directly control only the space navy and marines as commanding admiral. Ground-based forces are directed by the respective world governments, in coordination with the space military. System defense, excluding the immediate defenses of the worlds involved, is handled by the interstellar navy. The border patrol is a subdivision of the naval structure.

Refereeing the Sydymites

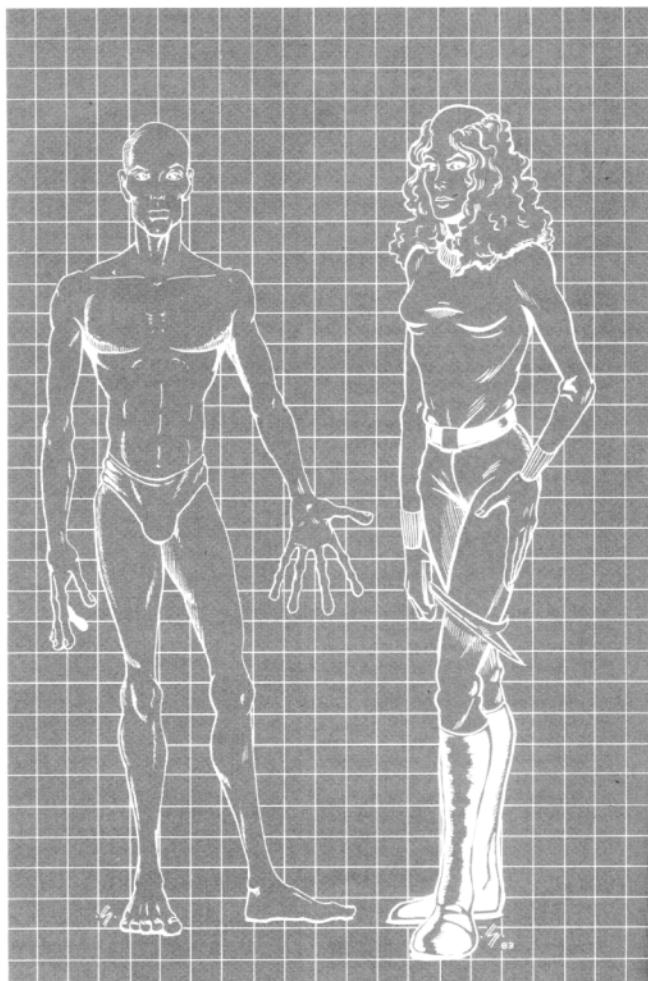
Ethnic Sydymites are appreciably larger and stronger than Solomani/Vilani

humans, though aging factors wear at them to a greater extent. The basic UPP of a Sydymite character is generated as for other humans, but a +2 die modifier is added to the strength score and a +1 die modifier to the endurance score; maximum scores in any event cannot exceed F (15).

The prior-service resolution for Sydymites is rather different from normal. Males with an endurance of 4- and

all females are exempt from the draft, though they may join military services voluntarily. These people resolve their prior service careers normally as per the TRAVELLER game rules (with some modifications described below).

Males with endurances of '5 are automatically drafted for one term of service in the military according to the following draft tables. All Sydymites start their careers at age 18.



Sydmite Draft Tables (males, endurance 5+)

Roll 1d6 on Table 1; use Table 2 only if directed by Table 1.

Table 1

roll	service
1	Army
2	Army
3	Army
4	Sailor (wet navy)
5	Flyer (fair force)
6	Roll on Table 2

Table 2

roll	service
1	Navy
2	Navy
3	Navy
4	Marines
5	Marines
6	Border Patrol (see below)

Notes:

Add a +2 die modifier to rolls on Table 1 at discretion of player if character's social standing is B or greater.

Change Army to Sailor if homeworld has hydrosphere of A.

Change Sailor to Army if homeworld has hydrosphere of 0 or 1.

Change Flyer to a reroll on Table 2 if homeworld has an atmosphere of 3-.

The noted term of service is served out as per the normal rules in Book 1 or Supplement 4. If the character survives, he may be mustered out if the player desires and may then re-enlist in some other service for another six terms maximum; the character may also re-enlist in the same service as drafted into, receiving a +2 die modifier on the first re-enlistment roll only. A character could, if desired, muster out of the drafted service and enter play at age 22.

Sydmite characters may enlist in any prior service described in the TRAVELLER Game Book 1 or Supplement 4, with the exception of the Barbarian career. Belter characters may start at age 18, not age 14 as is usually done. Characters may also enter Book 4 (Mercenary) if the army or marine careers are chosen, but may not use this system upon the first drafted enlistment; characters drafted into the army or marines must serve the first term of four years as described in Book 1, and afterwards may transfer their careers to the more advanced Book 4 tables. Similarly, Book 5 (High Guard) may be chosen only if re-enlisting in naval drafted service, or if the character is a female or male with endurance of . Characters using Book 4 are assumed to have had advanced training, and

did not actually serve as mercenaries.

The following changes must be made when rolling a Sydmite character and gaining skills: all Blade Combat skills must be taken with the .3 meter long blade weapon or with daggers; all Travellers' benefits are taken as +1 Social; the Battle Dress skill under the Sailor career is taken as Water Craft skill; the Pilot skill under the Flyer career is taken as Ship's Boat skill; the -1 Social adjustment under the Pirate career benefits is taken as a Weapon skill; the Scout Ship benefit under the Scout career (used for rolling up Border Patrol personnel) is taken as a Vacc suit skill for subsequent rollings of this benefit; and the Watch benefit in the Bureaucrat career is taken as Middle Passage. Cash benefits, of course, will be received in the currency of the Sydmic Empire, but are convertible and equivalent to the listed amounts in Imperial credits. Skills that can be only gotten from a TL 12+ culture, like Battle Dress and High Energy Weapons, can't be received within the Sydmic Empire and if encountered must be rerolled.

Aging resolution is modified for Sydmites by applying a -1 die modifier saving roll to avoid reductions in dexterity and endurance at all ages levels, due to the previously mentioned physiological problems they have. All other aspects of aging are as normal.

While psionic abilities are known to occur among Sydmites, they have no organized means of developing those powers (like the Imperium's clandestine Psionics Institute).

Although Sydmites do not have a nobility as such, they do have a distinct upper class that is involved with most governmental functions. Characters of Social Level B or higher are most often found in the Bureaucrat, Diplomat, or Noble careers ("nobles" are merely high-level bureaucrats) though they are not restricted to them. Social Level F, however, implies that the character has had direct dealings with the Regent himself and is assumedly on good terms with him, though the character is not necessarily in line to succeed the regent.

Border Patrol career characters use either the Scout career, Rogue career (representing one who has delved deeply into espionage and sabotage), or the Pirate career (those responsible for the attacks on merchant shipping and military targets in surrounding interstellar states). Thus, the Rogue and Pirate careers are not necessarily frowned upon by Sydmites in general, and even have a sort of special aura about them as spies always do.



Playing the Sydmites

The most frequently encountered Sydmites outside of their Empire are diplomats, government officials on various missions, military officers accompanying government people, and border patrols on exploratory or spy-related missions. Rarely will other sorts of Sydmite citizens be found, but it is likely that many of them will be acting as unofficial spies for their government. A Sydmite who travels for amusement is rare indeed as such travel is forbidden (except to those of very high social status). Rarer still is the Sydmite character who wants to defect to the Imperium, due to their patriotism and their distrust of other societies.

Player character Sydmites should reflect most of the traits described above, particularly distrust of Imperials and other outsiders, patriotism and dedication to the Empire though this may become a little tarnished, and a dislike for extravagance (again, this may be less the case among the upper classes). In general, Sydmites are quite willing to endure restriction or hardship if they feel it necessary.

If desired, a character may be a Solomani-descended human citizen of the Empire. Prior service resolution and skills acquisition are almost exactly the same as for ethnic Sydmites, though modifications to their UPP and aging resolution are not made and are performed as for normal human characters. Note that these Solomani-descended citizens will share the same attitudes as their taller cousins, and are often recruited into the Border Patrol service (+1 die modifier to die roll when rolling on Table 2) as they can better infiltrate Imperial and Zulani space and society.

SWORDS AND STARS

The Expanded Barbarian Class in TRAVELLER® Game

by Roger E. Moore

It has been noted that people who are used to gaming in a fantasy campaign sometimes have trouble relating to a science-fiction role-playing game, finding it hard to change from a warrior armed with longsword and plate-mail into a space marine with laser rifle and powered armor. In an article describing various backgrounds for a long-term TRAVELLER® game campaign*, Andy Slack suggested that a TRAVELLER game referee could have former fantasy-game players roll up barbarians and play them just as they did their characters in previous fantasy campaigns (without magical aid, of course); they would be entering into the realm of galactic civilization, rather than a world ruled by magic. The transition from one game style to another could be greatly eased, and fewer players might be "turned off" by the differences between the two systems. A possible campaign setting for barbarians in the TRAVELLER game was suggested in the campaign module *Thieves' World*, by Chaosium, Inc.

With this interest in bringing together fantasy and science-fiction games through the barbarian character, it becomes desirable to expand the barbarian class in the TRAVELLER game, to better describe barbarian capabilities, and to more clearly describe a barbarian character's previous life before he or she journeys into a starfaring culture. It is up to the referee and players to more fully describe the barbarian character's attitudes, cultural background, and personality (is the character a fighter? a thief? a minstrel? a woodsman? a religious wanderer? an ex-pirate on the high seas? a glider-pilot and scout? a cavalry soldier?). A barbarian character could act like a Hell's Angel, a subtle scholar, or be some other role entirely. Only imagination can limit the possibilities.

The following article is divided into three parts. First is an explanation of who and what is considered "barbarian" within the TRAVELLER game framework. Next is the expanded barbarian character generation tables with descriptions of new skills, prior service rationale, and racial notes. Last are

some suggestions for setting up adventures involving barbarians or other characters in the TRAVELLER game, with emphasis on planet-side traveling.

Definition and Background

A barbarian, by general definition, is an individual from a non-industrial (and probably agricultural) society of low population and primitive, pre-spaceflight technology. Such beings are fairly common, even within the borders of an interstellar culture; not every person can be completely integrated into advanced societies, and some colony worlds may regress technologically or have unexplored outbacks of low population density. Given these conditions, one would expect barbarians to be rugged and physically strong, used to long hours of manual labor. Experience in wilderness survival, hunting, and combat situations is common among barbarian characters.

Though typically thought of as human, barbarians may well be of other races, major and minor; there are numerous examples in the Imperium of minor human races living under barbarian-level conditions, and Varg and Aslan colonies (sometimes even Droyne colonies) may fall into this category. Rare instances have been reported in which a planet co-colonized by two or more races (on purpose or by accident) has been rediscovered at a barbarian cultural level. Although barbarians are just as intelligent or as stupid as beings from any other world, they invariably have poor educational and social standings when compared with beings from a world in the mainstream of galactic culture.

Barbarian worlds and societies by and large share a number of characteristics in common with one another. Starport quality is usually poor, being class D, E, or X (most often the latter). Their worlds tend to lie off the paths of the major starlanes and trade routes, in interstellar "backwater" regions. These worlds may be isolated by great distances from other starfaring centers, or by zones of hazardous travel (ionized dust or gas clouds, uneven space-time regions near black or white holes, etc.) Barbarian worlds are nearly always "open-air"

worlds, on which travel about the surface of the planet may be accomplished without high-tech protective suits or air tanks. World size may vary between 4 and A, atmosphere quality between 4 and 9 (supposing that the tainted atmosphere types may be tolerated or have been adapted to), and the hydrographic percentage level may be at any level (though values of 0 or A are rare; trace amounts of water for the former and land area in the form of islands of 5% or less of the world surface area for the latter are required). World population only rarely exceeds 6, and is likely to be centered around the watery areas on the planet.

The overall tech level of such a world, as mentioned before, is almost always 6 or less; worlds that have developed spaceflight become capable of world mapping and have a distinctly different consciousness regarding their self-image and placement in the universe than they formerly did. In effect, spaceflight dooms barbarism in a few short years. Cultures that have achieved spaceflight are also likely to have achieved the broad spectrum of technological advances (including automation, industrialization, telecommunications, and mass personal transport) of which spaceflight is a part. Perhaps this, more than the possession of spaceflight itself, spells the end of barbarism. Law levels on barbarian worlds are usually 4 or less, reflecting poor social awareness of weapons of high technical complexity, as well as the expected levels of lawlessness and societal conflict. Any government type is possible, though few barbarian worlds possess unified world governments. They are usually balkanized into dozens, and possibly hundreds or thousands of petty states, kingdoms, and so forth.

It should be noted that there are a number of exceptions to the above generalizations. Barbarian cultures may be found aboard giant derelict starships or regressed asteroid colonies, surrounded by the still-functioning relics of a forgotten technology. Wars sometimes leave a high-tech world in virtual ruin, inducing a barbaric state over much of the planet until it can rebuild itself or receive aid from other worlds. Some colonies,

although appearing quite advanced technically, may still adhere to barbaric customs and social systems (these people are often called "space vikings" in Solomani parlance). Barbarian warriors may be familiar with the use of advanced weapons and communications devices, though they may not be able to build or repair them and would obtain them only from traders or smugglers from other worlds. Barbarian individuals may even come from completely non-barbaric cultures and worlds, having rejected interaction with the culture and having decided instead to live in isolated areas of the planet.

Any attempt to describe specifically about what a barbarian individual would look like or think like is impossible. In Solomani history alone, barbarian cultures include such diverse offerings as tenth century Vikings, first century Romans, Aztecs, feudal Samurai, American Indians, African Zulus, Pacific Islanders, Australian bushmen, Han-dynasty Chinese, Huns, Hellenic Greeks, Eskimos, Revolutionary American frontiersmen, Neolithic tribesmen, pre-World War I Arabs, and a thousand more. Fantasy and science-fiction literature have long speculated on what varied sorts of barbaric societies could exist, widening the fields of possibilities even further. Now imagine the possibilities inherent in not just one world, but thousands!

Expanded Barbarian Tables

Barbarians have prior services histories of considerable variety and color. An individual may have been involved in many different activities in a single life-

time, ranging from the commonplace to the extraordinary. Careers may change several times as the individual ages.

Barbarian human characters are generated at age 14. Their basic characteristics are rolled up as outlined below:

Strength:	2d6
Dexterity:	2d6
Endurance:	2d6
Intelligence:	2d6
Education:	1d6+1
Social Standing:	1d6+1

The barbarian's homeworld should also be established at this time. Barbarians subtract one point from both Education and Social Standing for each level their home culture is below tech level 4; these two scores, however, may not fall below a value of 1 each. A barbarian gains an automatic skill with one type of combat weapon (see Weapons Skills Table (p. 10) and roll randomly or choose a weapon allowed under the tech level of the home culture or world).

After the above information is generated, the character's prior service history is started. A six-sided die is rolled, and the result indicates which of the specific services on the Barbarian Services Table is entered first. A second roll of the die indicates how many years that character will potentially spend in that service, should he or she survive. Each year within that service is resolved on the tables below, in a manner similar to that used in *Mercenary Book 4* or *High Guard* (Book 5). Survival rolls are made each year, with appropriate DMs listed in the table, followed by another roll to obtain a skill that year. No promotion, rank or awards system is included (these would mean little when transferred from a barbarian to an interstellar culture). Once all the years in one term of service have been resolved, assuming the character survived, the character may elect to muster out and enter play, or attempt to continue and enter another service for a 1-to-6 year term. Aging effects are applied at the end of each year that they would normally occur (i.e., at 34 years, 38 years, and so on). If a barbarian character successfully makes the "continue" roll to enlist another term of service, the service entered must be randomly rolled on the Barbarian Services Table. Though this process could con-

tinue indefinitely, characters should be mustered out before the aging effects become too pronounced.

I. Barbarian Services Table

1	Military
2	Military
3	Military
4	Civilian
5	Civilian
6	Criminal

II. Barbarian Services Resolution Table

	Military	Civilian	Criminal
Survival	6+	4+	7+
DM -2 if	Stren 8+	—	Intel 9+
Skill	7+	8+	6+
Continue*	5+	5+	5+

*Roll only at the end of a 1-6 year term of service.

To determine what skills were learned, check the Military, Civilian, and Criminal Skills Tables as appropriate, rolling to see which sub-table (Common Skills, Recreational Skills, etc.) will be used for skill determination, then roll again on the sub-table for the specific skill. A barbarian character may instead roll on the Personal Development Table any time a skill is earned to increase his or her UPP scores instead of obtaining a specific skill. The resulting UPP modification is applied immediately to the character.

If a weapon skill is received, the player must roll on the Weapons Skills Table to find the general class of weapon learned (Blade, Gun, Brawling, Bow, or Shield), applying DMs for the homeworld's tech level (TL). Then a specific type of weapon may be chosen from the Weapons Tech Table, which correlates the homeworld's TL with the type of weapons that can be manufactured and maintained by it. Any weapon from the TL of the barbarian's homeworld or from a lower TL may be chosen, but no weapons on a higher TL may be received. Descriptions of all listed weapon types may be found in TRAVELLER Book 1 (1981 edition).

If a Vehicle Skill is received, the player goes to the Vehicles Tech Table and may choose a vehicle type available to his or her homeworld's TL or to a lower TL. No vehicles made by TLs higher than that on the homeworld may be picked. (Note: Though Non-powered Glider Craft may be manufactured at TL 0 or 1, they rarely if ever come into general use until

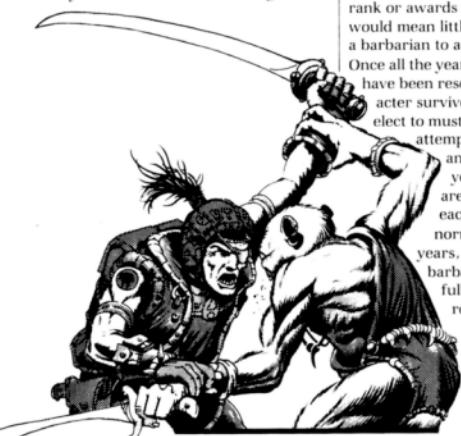


Illustration by Timothy Truman

TL 2+.) Only if the homeworld type fits the parameters listed after each vehicle type can that vehicle be chosen (watercraft, for instance, would not be used on a world without water).

III. Personal Development Table

- 1 •2 Strength
- 2 •2 Dexterity
- 3 •2 Endurance
- 4 •1 Strength
- 5 •1 Dexterity
- 6 •1 Endurance
- 7 •1 Strength
- 8 •1 Intelligence
- 9 •1 Education

DM •3 if character is 34+ years old, or at option of player if homeworld TL 4+.

IV. Military Skills Tables

- 1 Basic Military Skills
- 2 Basic Military Skills
- 3 Basic Military Skills
- 4 Recreational Skills
- 5 Command Skills
- 6 Command Skills
- 7 Technical Military Skills

DM •1 if homeworld TL 4+.

Basic Military Skills

- 1 Survival
- 2 Weapon Skill
- 3 Weapon Skill
- 4 Recon
- 5 Vehicle Skill
- 6 Mechanic

Recreational Skills

- 1 Carousing
- 2 Gambling
- 3 Streetwise
- 4 Vehicle Skill
- 5 Weapon Skill
- 6 Hunting

Command Skills

- 1 Interrogation
- 2 Recruiting
- 3 Tactics
- 4 Instruction
- 5 Leader
- 6 Tactics

Technical Military Skills

- 1 Mechanical
- 2 Combat Engineering
- 3 Medical
- 4 Land/Sea Navigation
- 5 Forward Observer
- 6 Communications

V. Civilian Skills Tables

1 Basic Civilian Skills	4 Recreational Skills*	6 Organizational Skills
2 Basic Civilian Skills	5 Recreational Skills*	7 Advanced Skills
3 Basic Civilian Skills		

DM •1 if homeworld TL 2+. *See skill tables in Military Skills Section.

Basic Civilian Skills Organizational Skills Advanced Skills

1 Survival	1 Streetwise	1 Arts
2 Hunting	2 Admin	2 Medical
3 Steward	3 Admin	3 Prospecting
4 Farming	4 Instruction	4 Mechanical
5 Vehicle Skill	5 Leader	5 Medical
6 Mechanical	6 Liason	6 Jack-o-Trades

VI. Criminal Skills Tables

1 Basic Criminal Skills	Basic Criminal Skills
2 Basic Criminal Skills	1 Survival
3 Advanced Criminal Skills	2 Streetwise
4 Advanced Criminal Skills	3 Vehicle Skill
5 Recreational Skills*	4 Carousing
6 Command Skills*	5 Weapon Skill
7 Technical Criminal Skills	6 Weapon Skill

DM •1 if homeworld TL 4+. *See skills tables in Military Skills Section.

Advanced Criminal Skills

- 1 Weapon Skill
- 2 Assassination
- 3 Bribery
- 4 Theft
- 5 Recon
- 6 Theft

Criminal Technical Skills

- 1 Mechanic
- 2 Forgery
- 3 Demolition
- 4 Medical
- 5 Weapon Skill
- 6 Jack-o-Trade

Having completed his or her last term of service as a barbarian, the character is ready to be mustered out. For every four years (rounding up all fractions) that a barbarian has spent in all the prior service careers put together, the character is given one roll on the Benefits Table, which provides combined cash and material benefits.

character a trained horse or horse-like riding animal, a small boat, or some other vehicle type the character has expertise with that costs less than 5000 credits. Further receptions of the Vehicle benefit are taken as a skill level in using the vehicle received. The amounts received in credits if a cash benefit is obtained may optionally be taken in the form of local currency, gold bullion, gems and jewels, precious materials, or other goods. It must be remembered that whatever goods the players want to buy should only be those normally available to that world's tech level (i.e., no wristwatches may be found on a TL 1 planet).

VII. Benefits Table

1 Weapon
2 Weapon
3 Armor
4 Vehicle
5 20-120 credits
6 50-300 credits

The Weapon Benefit may be taken as a physical example of a weapon the character has experience with, or (on subsequent rolls of this benefit) as further expertise in that weapon. The Armor Benefit gives the character a suit of jack armor; a shield comes with the armor if the character has the skill with the shield. Subsequent rolls of Armor give that character a level of skill in using a shield even if the character is from a TL 2+ world. The Vehicle Benefit gives the

VIII. Weapon Skills Table

1 Shield	6 Brawling
2 Bow Cbt	7 Gun Cbt
3 Blade Cbt	8 Gun Cbt
4 Brawling	9 Gun Cbt
5 Blade Cbt	

DM •1 if TL 2;

DM •2 if TL 3;

DM •3 if TL 4+.

(These die modifiers are not cumulative)

IX. Weapons Tech Table

TL 0	Brawling Skill Blades: Cudgel, Spear Shield Skill Bows: Sling
TL 1	Blades: Dagger, Pike, Sword Blades: Broadsword, Halberd Bows: Crossbows (all types) Guns: Matchlock Hand Cannon
TL 3	Blade: Bayonet, Blade, Cutlass, Foil Guns: Flintlock Musket
TL 4	Guns: Flintlock Pistol (muzzle- loader), Percussion Pistol (muzzle-loader), Percussion Revolver, Percussion Rifle, Shotgun (1 or 2 shot)
TL 5	Guns: Carbine, Autopistol, LMG (water-cooled), SMG, Shotgun (standard TRAVELLER® type), Rifle
TL 6	Guns: Autorifle, LMG (standard TRAVELLER type)

NOTE:

See Book 1 (1981 edition), pgs. 42-43 for a discussion of how primitive firearms operate. If a level of skill is gained with an antique weapon, the skill is not transferable to any other sort of weapon. Thus, Matchlock Hand Cannon-2 Skill cannot be applied to any other weapon, even though such a device (according to Book 1) is treated in combat as a body pistol. Gaining a level of skill with any gun weapon, however, allows one to use all other guns at a level of one-half effectiveness. Barbarians who have no skill with any gun have a -5 DM applied if using them, as per Supplement 4 of the TRAVELLER game books.

Explanations of New Skills

Land/Sea Navigation: Although this skill has nothing to do with navigating a spacecraft, it otherwise functions as the Navigation skill in TRAVELLER Book 1.

Farming: This skill includes a basic familiarity with the methods prevalent on the homeworld of agricultural food production; higher levels of skill allow the individual to grow more food on less area, identify plants on the homeworld, and possibly identify poisonous plants. Some skill at weather prediction is also conferred by this skill.

Arts: The Arts skill gives the individual knowledge in one of the following fields: Music, Sculpture, Illustration, Acting/Oratory, Dance, Photography, or other artistic fields as further developed by the referee or the player. Every two levels of Arts skill may if the referee allows and if the situation is appropriate be used as a +1 DM on the Book 3 Reaction Table. The possibilities in making money using this talent should be obvious.

Assassination: This skill gives a character a +1 die modifier to surprise opponents when the character is traveling alone. A person with this skill is also capable of killing an opponent of humanoid appearance (including Varg, Aslan, Droyne, and Humaniti) with any weapon if the opponent is surprised, on a roll of 11+ following a successful "to hit" roll with the weapon. If this assassination roll fails, normal damage is done to the victim. Each level of this skill over the first confers an additional +1 DM to this "instant kill" roll. Referees may modify this roll based on precautions the victim has taken, if appropriate. The

+1 die modifier to surprise victims is also cumulative with each additional skill level.

Theft: This skill reflects an individual's ability to shoplift or pickpocket a small item or items (roughly 0.2 meters long) without being seen, or otherwise noticed. Theft skill allows one to lift wallets, necklaces, and the like from people when one appears to be doing something else entirely (patting on the back, dancing, kissing/hugging, etc.). Persons without Theft skill will be successful only on a roll of 11+; a +2 DM to this score is given with each level of Theft skill. Persons with Theft skill will also gain a cumulative +1 DM when using a lockpick kit to open a non-electric lock.

Shield: Not everyone knows how to properly use a shield. An untrained person trying to use a shield will gain only a -1 die modifier to be hit by blade or brawling weapons. A person with the Shield skill gains a -2 die modifier to be hit by a blade or brawling weapons, and a -1 die modifier to be hit by gun or bow weapons. The person using the shield must have consciously tried to interpose the shield between him or her and the opponent. A shield bearer may attack an opponent in the same round he or she is defending with the shield, but can only use a one-handed weapon. Note that a shield protects against animal bites, claws, etc. A small shield (0.5 meter diameter or less) will defend against at most one person; larger shields (up to 2 meters tall) may defend against up to three opponents attacking from a character's front and sides. Small shields weigh about 5 kg, and larger shields average 10 kg or more. Higher tech levels will be capable of making lighter and possibly tougher shields. Some shields may have a central spike (doing dagger damage, shield skill needed to hit an opponent as a normal blade weapon). A few advanced-tech worlds have police forces that utilize shields, some with a gun weapon mounted in the shield's center, but this practice is uncommon. (If the game referee is using AZHANTI HIGH LIGHTNING™ game rules for melee, shields may allow a -1 or -2 DM (depending on size and quality) on the Damage Table on p. 24.)

Swimming: This skill reflects an individual's survival ability in the water, movement speed of swimming, quality of diving and depths reached, and so forth. An individual may have a Swimming -1/2 skill, which is basically drown-

X. Vehicles Tech Table

All presume an open atmosphere of 4+ unless stated otherwise.

TL 0	Swimming Skill Small Oared Watercraft	(Hydro 3+)	TL 3	Lighter-Than-Air Craft	(Atmos 6+)
TL 1	Equestrian Skill Large Oared Watercraft	(Hydro 9+)	TL 4	Steam-Powered Land Craft Steam-Powered Watercraft	(Hydro 1-9)
	Teamster Skill Small Sailed Watercraft	(Hydro 9+)		Fixed-Wing Air- craft, Prop	(Atmos 6+)
TL 2	Nonpowered Glider Craft Large Sailed Watercraft	(Atmos 6+)	TL 5	Wheeled Vehicles Fixed-Wing Air- craft, Jet	Hydro 9+
		(Hydro 3+)	TL 6	ATV Rotary-Wing Aircraft	(Hydro 9+)
					(Atmos 6+)

proofing and a knowledge of how to float. See the *Journal of the Traveller's Aid Society* #2.

Equestrian: This gives a character familiarity with how to properly mount and ride domesticated beasts of this type described in Deluxe TRAVELLER® Book 3, pgs. 20-21. This skill was originally described in the *Thieves' World* campaign module, in the booklet "Personalities of Sanctuary," p. 50.

Teamster: This is the ability to drive an animal-drawn cart or wagon. As noted above, this skill was also previously listed in the *Thieves' World* game module.

All "small" watercraft are assumed to be about the size of a modern sailboat or less; "large" watercraft are those ranging up to the largest steam and sailing ships of the 1700s and 1800s. All other skills have been previously described in TRAVELLER Books 1, 4, 5, and Supplement 4 (*Citizens of the Imperium*).

Players wishing to roll up Aslan, Vargi, or Zhadani barbarians may do so using the information given in the various issues of *The Journal of the Traveller's Aid Society* (47-#9), or in supplements to the TRAVELLER game system on alien characters. The referee and players will have to decide on how such characters may enter play in a largely Vilani-Solomani universe, but a world colonized by several races is always a possibility.

Barbaric Droyne societies are not especially uncommon. A Droyne barbarian may be generated from the Droyne Acquired Skills Table in *Adventure 3: Twilight's Peak*, with the following changes made on some of the skills therein: eliminate the Advanced Education table, change Engineering and Electronics skills to Mechanical, change Commo skills to skills to Mechanical if TL 4, change Computer to Medical, change Gravitics and Vacc Suit skills to Vehicle (on the barbarian vehicles lists, or treat as Flying skill), change Interrogation skills to Black skill (and roll for specific skill on that table), and change Demolition skill to Weapon -2 skill if TL is 3. All else is as normal for Droynes, unless the society has lost their ability to assign castes with coyns, in which case all the Droynes are sportys. All weapons are as described for barbarians in general. Droynes may learn to use shields of small size only (see picture on p. 64 of *Adventure 3*).

Making up a rationale for a character's past history can prove to be quite enjoyable. What did your character do to earn that Assassination skill? A barely-

made survival roll and a Leader skill earned the same year could mean the character was a courageous mercenary commander who personally led charges against the enemy, or it could mean a failed assassination attempt on the character when serving as a provincial mayor or governor. Creating this history will make role-playing the character much more enjoyable: you develop a good idea of the character's personal attitudes and style, and may find other people enjoy your character's presence as much as you do. One's past experience with fantasy role-playing games will come in handy here.

Adventures For Barbarians

As a background for barbarian adventures, the referee should design a home-world on which most of the play will occur and detail it as much as possible. In particular, the areas the characters come from should be mapped out (just as in any fantasy game) and appropriate local histories and social notes should be laid out. Because this is basically a science-fiction game, many of the adventures could be oriented around contact with more advanced societies. For example:

The adventurers could hear rumors of a place where gods land on the earth in great meteors (possibly a starport). The players may decide to take the long trek to learn what they can about this phenomenon. What will they do when they can find that the gods are mortal?

A legend may be circulating among the tribes that some unknown warriors buried a cache of treasure and magical artifacts in a cave some distance from the tribe's lands. Could this be a false legend, or could it mean some other tribe buried gold and silver there? Were the warriors just bandits, or a royal party burying a chieftain or king with his wealth? Were they pirates from space hiding technological loot and Imperial credits? Paper money may appear worthless to barbarians unfamiliar with it; in one campaign I took part in, two of the barbarian characters were even unfamiliar with gold and silver currency and threw away hundreds of coins for amusement.

An old, disabled starship might be uncovered in a rocky or overgrown jungle area. What secrets did it hide? How much of it might be functional still?

Unknown to the players, an Imperial research station is located on the barbarian planet. What if the player characters accidentally discover it? Other variations on this theme might have the

local tribes discover that a creature not of their world (and carnivorous in nature) was accidentally released by said research station, which doubles as an alien zoo. Can the players catch and kill the beast? How will they react to the station afterwards?

What if some off-world travelers want to hire the group as guides into barbaric regions? What if the travelers offer to take the player characters off-world for some reason?

These are only a few of the possibilities. In addition, any number of adventure modules currently available (especially the *Thieves' World* city system) can be adapted with a little work to fit into a TRAVELLER game campaign. If the referee is agreeable, perhaps a magical system (as mentioned in the TRAVELLER game section of *Thieves' World*) could be developed, though psionics would probably do just as well. Psionic characters would be rare in this world, though rudimentary training might be had for some very high rates, taking years to properly learn at a local "Wizard's College." One could go so far as to convert the maps of Greyhawk, Blackmoor, the City State of the Invincible Overlord, Arduin, Cidre, or the Young Kingdoms from various fantasy role-playing games to the world map.

The TRAVELLER game rules could be expanded to include new types of armor (like chain mail), new weapons (axes, for instance), alchemy and herbal sciences (chew this plant to become stronger, crazier, intoxicated, or poisoned), other new primitive skills, and more. Perhaps the most interesting expansion might be to develop a rationale for using fantastic creatures found in other fantasy games. "Orcs" might be a variant race of Humaniti native to a certain world. There might be dragons in the mountains, and they might breathe fire. Might there not be "gods"? This latter possibility could be very interesting to try and explain through scientific and technological means.

Barbarians can add a new dimension to TRAVELLER game campaigns with their emphasis on the primitive against the ultra-modern, and with the orientation toward a planet-based campaign. Those players who have yearned to drop the sword and draw the laser rifle on the band of brigands bearing down on them might just find this system to be their best opportunity.

"A Backdrop of Stars," by Andy Slack, WHITE DWARF™ Magazine #24 (April/May 1981).

By Greg Costikyan

Tea With The Black Dragon

**R.A. MacAvoy, Bantam Books, \$2.75
(paperback)**

It is a real treat to find a new author who writes something that is not only a good first effort but a superb book in its own right, one I expect to reread several times in the future. I'm speaking of R. A. MacAvoy's *Tea with the Black Dragon*.

Credit should go to Bantam for publishing MacAvoy. *Tea with the Black Dragon* is not easily categorized, and this is an era in which publishers are increasingly on the hunt for books they can fit neatly into a marketing category.

The story takes place in modern California, shifting between San Francisco and Silicon Valley; it is a fantasy novel in which the wizards are computer programmers and their magic works with microprocessors. The main character of the novel is indeed a dragon, an oriental one who has adopted human shape in order to learn more about human nature and satisfy a millennia-long interest in language. When he meets a woman in San Francisco whose programmer daughter has disappeared, he pulls out his copy of Knuth to bone up on programming languages before venturing forth to help.

Tea with the Black Dragon is a book mystery lovers, computer people, and fantasy fans will all enjoy. In a way, it is a shame that Bantam's packaging is so oriented toward the fantasy market, as this is the kind of book that could do very well in the mainstream. MacAvoy is a perfectly charming writer, and I, for one, will look forward to the next work of this author with great anticipation.

The Rainbow Cadenza

J. Neil Schulman, Simon and Schuster \$15.95 (hard cover)

On one level, *The Rainbow Cadenza* is about conscription and its inherent evil. In this world's past, genetic technology allowed the selection of the sex of children, and the result was that many more males than females were born — partly because most cultures discriminated in favor of males, and because many cultures provided bounties for those who produced soldiers. To relieve the sexual frustrations

of the populace and to prevent violence, the world government has instituted conscription of women; for two years, each woman must serve as a militarized prostitute.

On another level, it is a novel about art. Joan Darris, the protagonist, studies lasography, the artform of laser imaging. She is a superb player, but her career is cut short by the draft. She must make a choice between what society claims are her obligations, and the goals which she wishes to pursue.

On yet another level, the novel is humorous: A female draft, for the (diluted) purpose of "making love, not war"; an America in which the predominant religion is Wiccan Paganism; a Libertarian Party whose leader is a defender of the draft and himself an oppressive swine.

The Rainbow Cadenza is a personal novel of an artist attempting to survive and grow despite the oppression of the state, and attempting to discharge obligations to friends despite all legal and emotional obstacles. Joan Darris is, to my mind, one of the most appealing heroines of modern science fiction.

A Century of Progress

**Fred Saberhagen, Tor Books, \$2.95
(paperback)**

I like Saberhagen quite a lot, so it grieves me to report that *A Century of Progress* is under par. The premise is interesting: A trans-temporal, trans-universal war is being conducted between an alternate reality empire which derives from Nazi Germany and a group of people who (one presumes) are freedom-loving democrats. (I say presumes, because Saberhagen never actually shows that they are democrats — simply that they are opposed to the totalitarians.)

The protagonist, Alan Norlund, is recruited by the good guys, and sent on a mysterious mission into Chicago in the 1930's. After several adventures, he meets the girl of his dreams, is made young again, and barely misses killing Hitler. At the end of the novel, the implication is that he marries, decides to spend his life killing Nazis, and lives happily ever after.

Saberhagen has several powerful themes in this novel which he does not adequately develop. The title, *A Century*

of Progress, combined with the stylized swastika on the cover and the portrait of Hitler, is quite chilling; what would the world be like in 2039 if the Nazis had won? That's a chilling thought in itself, but Saberhagen doesn't show us.

There is a trans-universal war going on across the dimensions, a war against totalitarianism, yet we are shown only a single alternate reality, one almost identical to our own universe. Are the Nazis the only totalitarian force against which the Good Guys strive?

There is a wealth of colorful possibilities in the alternate reality theme, and a motivating reason to visit lots of them — the fight against the Bad Guys. Yet none of this happens. Instead we are left with a rather drab story.

A Century of Progress is based on a good idea which is not adequately exploited. As such, it is one of Saberhagen's lesser novels.

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by Steve List

STAR TREK™:

The Role Playing Game.

Design: Guy McLimore, Greg Poehlein and David Tepool. FASA 1983. \$25 boxed.

This is it, the official STAR TREK role-playing game as licensed by Paramount Pictures. After many years of waiting, Trekkies may now indulge in the "real thing."

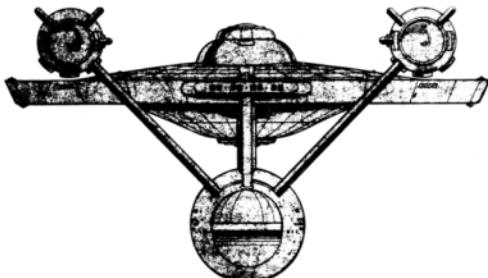
The physical packaging of this product is quite impressive. Inside the 9" x 12" x 2" box is a 128 page rulebook, a 56 page adventure book, 80 sheets of deck plans and "control panels" for spaceship combat, a 22" x 33" hexgrid star map for said combat, 112 die-cut counters printed on one side with spaceships and bookkeeping markers and on the reverse with character figures for use in personal combat, and two 10-sided dice. The physical quality of these components is quite high, and the design quality is as well, though there are a certain number of nits to pick in both areas.

The rulebook is quite complete, both in terms of covering game rules and in giving background information for players not familiar with the STAR TREK game universe (we were warned that any similarity between FASAs and Task Force Games' versions is purely fortuitous). The introduction not only discusses STAR TREK and the sources used for the game, it explains the concept and principles of role playing. This is followed by a Glossary, a discussion of character attributes and the player character races (pending later supplements, players are restricted to being Federation member races: Human, Vulcan, Andorian, Caitian, Edoan and Tellarite). Included is a section with character stats on 19 named characters from the TV show and a sample of typical personnel of various races. Then comes the character generation procedures, a description of skills and levels, personal combat procedure, medical aid and recovery from injury. Sections covering common items of weaponry and equipment are followed by procedures for creating worlds, civilizations, and wild animals. After this comes a digression covering the history of the United Federation of Planets. The balance of

the book covers starships (capabilities, combat, and encounter procedures), gamemaster hints and designers' notes.

The Adventure book devotes 35 pages and a pull-out section of ship control charts to three scenarios which can employ player-generated characters or the familiar STAR TREK personae. The remaining 17 pages contain data on the USS Enterprise and the Klingon D-7 class battlecruiser, and are keyed to the deck plans. These are quite well done, con-

ting. Intelligence, Dexterity and Charisma are determined by rolling 3d10 and adding 40, then adding or subtracting an additional modifier determined by the character race. Luck and Psionic potential are rolled directly on percentile dice, with racial modifiers. Any action that will directly use one of the attributes will be resolved by rolling the attribute value or less on percentile dice, with possible modifications. Skills are similarly rated on a 1-100 scale but are



sisting of six pages for the Klingon and nine for the Enterprise measuring 11" x 17" and printed on both sides, with a $\frac{1}{4}$ " square grid superimposed. There are two drawbacks with these plans. One is the $\frac{1}{4}$ " grid; the personal combat mechanics call for the use of a $\frac{1}{2}$ " grid, and the counters provided in the game fit that size (these plans have been released separately in $\frac{1}{2}$ " size as well). The plans are usable, but counters or miniatures will be crowded, taking up more than one space. The other drawback is in the layout. The plan sheets are printed on both sides, so that it is not possible to see all the plans at once. In addition, the larger sections (such as the Enterprise's "saucer") may be on as many as four different sheets, and no key is given to aid in mating the sheets together.

Three key elements in a role-playing game are the procedures for generating and progressing characters, combat mechanics, and the creation of an environment in which to conduct activities. The STAR TREK game aquits itself well on the first two and adequately on the third. Characters have 7 attributes rated on a scale of 1-100. Strength, Endur-

ance, Intelligence, Dexterity and Charisma are determined by rolling 3d10 and adding 40, then adding or subtracting an additional modifier determined by the character race. Luck and Psionic potential are rolled directly on percentile dice, with racial modifiers. Any action that will directly use one of the attributes will be resolved by rolling the attribute value or less on percentile dice, with possible modifications. Skills are similarly rated on a 1-100 scale but are

used somewhat differently. A skill rating of 10 is deemed sufficient for proper performance of routine activities, and no roll is made. If the skill is less than 10, a saving roll is made with 1d10. In any event, resolution of non-routine actions must still be resolved by a roll of percentile dice versus the skill rating (combat procedures are treated in yet another fashion).

When generating a character, it is determined what rank and position the character holds in Star Fleet when he enters play and the procedure builds up to this. First, the character can acquire skills prior to entering the academy by rolling 1d10 to determine the rating in each skill (the number of rolls is determined by the Intelligence attribute). Graduation from the academy is assumed, and specific levels of specific skills are granted, depending on the area of specialization. Additional skill rolls can be made at this time. The character then goes on one or more cadet cruises, followed by command school (for commanding officers and department heads) and a variable number of terms, which in turn take a variable number of years to complete. These all translate into

additional skill level awards and die rolls, plus years added to age 18 to determine how old the character is at the start of play. Becoming too old may cause reduction in various attributes. It should be noted that the stats given for Enterprise personnel such as Captain Kirk are virtually impossible to duplicate by these procedures. These folks are considered to be extraordinary and have combinations of skills, attributes and age unobtainable by beginning player characters.

Personal combat is resolved using a $\frac{1}{2}$ " square grid for movement and an "action point" (AP) system, with 10-second turns. Each character gets a certain number of APs based on Dexterity, and everything done costs APs. The procedure is used so players may determine who moves first. The first player then moves one character, expending APs as desired, possibly retaining some for opportunity actions later in the turn. Characters not moving can expend APs for opportunity actions (such as shooting a phaser) during another's movement. Players alternate moving one character at a time in this manner. Combat is resolved with weapons or unarmed combat in the same manner. The "to hit" number (average of Dexterity and weapon skill), modified for factors such as range, target size and movement, must be rolled on percentile dice. If a hit is scored, damage is inflicted as points subtracted from the target's endurance. Once a character has lost half the original endurance, a saving roll on Endurance must be made to avoid unconsciousness. Dropping the Endurance to less than 10% of its base value also brings unconsciousness, while reduction below 0 causes death, barring prompt medical treatment. In addition, some weapons produce "stun" results rather than wounds. Losses to Endurance from these cause only unconsciousness, not death.

Starship combat is resolved as a boardgame on the hex map provided. An effort is made to keep a role-playing flavor, however. The players are expected to be in the command positions of a ship, i.e. Captain, Helmsman, Engineer and so on. Each position but the Captain has a "control panel" on which the functions of that job are tracked. The Engineer has engine status, total power

available, and allocates power for weapons, shields and movement. The Science officer operates the sensors and keeps track of structural damage. The Navigator operates the tractor beam and allocates the power given him by the Engineer to the various deflector shields. Communications keeps track of crew casualties, while Helm has most of the work (movement of the counter on the map, arming and firing weapons, changing speeds and executing maneuvers.) The Captain has no control panel, but must coordinate and control the actions of the others. Control panels are given only for the Constitution class starships (and in the adventure book for a Mission class courier). All other vessels will be nominally run by the GM, and to reduce the workload, a modified single sheet panel using a streamlined procedure is available for them. To resolve combat, each ship alternates moving one hex on the map, with the number of hexes to move each turn determined by energy allocated to maneuvers. Weapons may be fired at any point in the game turn. Weapon fire results are based on "to hit" dice rolls, and, if a hit is scored, weapon power versus shield strength at the point of impact. If a hit penetrates the shield, it can damage the engines, wipe out individual weapons, shields, sensors, etc., and create crew casualties which will eventually degrade performance.

The mechanics of play are well done. Less satisfactory is the campaign aspect of the game. The design approach was to make the STAR TREK game episodic, like a TV series, with no direct continuity from one scenario to the next. Hence there is no map of the galaxy and no set of encounter tables to allow cruising around to see what happens. Travel time between planets is ignored, as all action will nominally happen in one place or on one ship. The players are presented with a situation, they resolve it (or not — characters can get killed in this game), and that is it until the next episode. Character progression between episodes is limited as well. A character may attempt one saving roll versus Intelligence at the end of an episode. If successful, a $1d10$ skill increase of one skill that was successfully used may be obtained. The GM is permitted to perform, but is then cautioned to be

charter of allowing increases above the 40-50 range. Altogether, the RUNE-QUEST game system of skill increases is more rewarding to the player and easier to administer.

STAR TREK game is an ambitious work, generally well-done, with some minor flaws. The worst of these is in any case a matter of taste — the episodic nature of things versus the continuous campaign approach. Further, there is no reason a GM could not make her own campaign a continuous one if she should desire. The matter of a galaxy map is discussed in the rules, and the possibility is held out that one might be published in time. Beyond that, there is nothing really significant that not be cured by the supplements planned for release in the near future. Acquiring all the STAR TREK game material may be financially costly over time, but that is true of all the major role-playing games. What is provided in this package is well worth the price.

STAR TREK™ 15mm Deck Plans.

Supplement for use with STAR TREK: The Role Playing Game, FASA, 1983. USS Enterprise \$15. Klingon D-7 Battlecruiser \$12.

The Enterprise and Battlecruiser consist of slight modifications of material already in the STAR TREK game package. In each case, the approach was to print the deck plans in a larger size, a nominal 15mm (the actual grid size is $\frac{1}{2}$ inch), and to include a booklet on the ship which contains the same information given in the RPG's "Recognition Handbook," fleshed out with some incidental illustrations.

Missing from each package is a set of control Panels for tactical starship combat resolution. Although panels for the Enterprise are included in the game itself, there were none for the Klingon vessel. It would seem logical to place the panels in each set of deck plans as they are published, since FASA apparently plans to release more of them in the future. Logic does not seem to rule.

These plans are of use only to players who find they cannot live with the smaller grid versions supplied with the game. Although handsome enough in their own right, these two items are hardly vital to play of the game.

by Christopher John

Krull

Director Peter Yates
 Producer Ron Silverman
 Screenplay Stanford Sherman
 Music James Horner
 Photography Peter Suschitzky
 Colwyn Ken Marshall
 Lyssa Lysette Anthony
 Ynry Freddie Jones
 Cyclops Bernard Bresslaw
 Ergo David Battley

As I came out of the preview of *Krull*. Columbia Pictures' latest attempt to capture the loose dollars of America, I overheard a conversation. Two college-types were debating what the MAD Magazine takeoff of the picture would be called. Their best predictions were *Krawl*, *Krudd* and *Dull*. The old saying goes, a picture is worth a thousand

words. Those who say that don't lie; this motion picture is worth 997 more words just like the three above.

The plot of *Krull* goes along the following lines: The Beast, the most feared creature in the universe, comes to Krull to conquer the planet the way he has thousands of worlds in the past. He does this quickly (off camera, big battles cost more money), and soon all of Krull is in thrall to him except two little kingdoms. They plan to unite after the marriage of the one's prince and the other's princess, but the Beast, who for some reason has taken a liking to the unrealistic, naive childlike princess Lyssa, captures her and kills off both kingdoms' armies in the process.

Luckily, his Slayers only wounded the prince. He is patched up by crafty, stern, wise old Ynry who leads him to the weapons and helpers he will need to defeat the Beast.

Ken Marshall stars as a swashbuckling warrior prince in Columbia Pictures' fantasy-adventure *Krull*. Directed by Peter Yates, *Krull* is a Ted Mann-Ron Silverman Production.



The plot rings so hollowly true, one wonders if the whole movie wasn't plotted out in some gold-chain-wearing producer's Mercedes as he and his staff zipped along through the Californian hills. One can hear him tweeting, "You know, we'll have the bad guy, ah . . . the Beast, yeah, and we'll have him land in a spaceship, and send his troops out to kill everyone on the planet and bring him the most beautiful woman — yeah: an' she could be like just gettin' ready to marry the hero, and that's when they nab her. Then he can find, like, some wizard to help him, and they can have a buncha adventures before they finally rescue the girl. Can't ya see the bad guys in their space suits, a whole buncha them on horseback, firing their lasers, and every —"

About here, one of his newer staff members probably interrupted him, making some mild comment about spacesuits and lasers and saddles not going together. The staffer was thrown out of the car, but the horseback-riding aliens weren't, and *Krull* was born.

There really isn't much more to the picture than that. After the kidnapping of the princess, the hero goes about, mucking up things for an hour, until he finally gets on the track. You see, the beast's castle disappears every morning at sunrise, and reappears in another part of Krull. So, mighty Colwyn and his band of stock fantasy characters must find out where this castle will reappear so they can get to it and slay the Beast and save beautiful Lyssa. Most of the movie is spent with the small group trying to find a wizard who can stay alive long enough to tell them where the Beast's rocky spaceship will reappear. Once they discover where it is, the audience is then subjected to the film's worst bit of nonsense, the firemares.

I have long wondered when some smart fantasy filmmaker would take note from Frazetta's books and put his warriors on Clydesdales, the only good-looking war-horses the world has ever seen. It is a shame to see such a good idea ruined by the stupidity of this movie. Discovering that the Beast's castle would appear somewhere far away, the heroes decide to capture firemares, legendary uncatchable horses that run at super speed. They do this, race to the Beast's, most of them die, but the hero

saves the girl, and the film ends.

Someone recently got the idea that fantasy sells. *Conan the Barbarian*, as bad as it was, made money for two reasons: a) its vast fan audience started the cash rolling in, showing the rest of the public that *someone* was going to see it, and b) despite how bad the film was (as a treatment of Howard's creation) most people were hungry for something different, and the clanking hunker of trash which was *Conan* came along to clean up. It was enough to get the merchant class's wheels turning and it has been bad to awful fantasy films ever since.

In *Krull*, the acting is mediocre and the direction only competent. The editing and photography are splendid, but they cannot, in themselves, make up for the hideously bad story. The special effects are standard in some places, better in others; none of them are bad. The music, yet another of James Horner's variations on his score for *Battle Beyond The Stars*, is good enough though audiences may soon tire of the poor producer's John Williams the way they have started to tire of Williams himself.

A lot of money was poured into this production, but as the old saying goes,

... Krull, Krudd, and Dull... A picture is worth a thousand words... and this picture is worth 997 words just like these.

"some people can tell a story, and some people can't." Compare *Battle Beyond The Stars* and *Star Wars*. Battle had the same budget, more big-name stars, a more interesting, innovative plot, just as good a director, et cetera. What it did not have, however, was that magic bit of heart needed to tell its story in a fresh, emotional, meaningful way.

Krull seems to have been slapped together from the oldest clichés in fantasy. Occasionally, a cardboard cutout with no life of its own, such as *Superman II*, can rake in a bundle and trick people for this reason or that into thinking they saw something worthwhile. Most of the time, though, they crumble, unable to trick anyone into thinking they are more than they are. In *Star Wars*, one could go from one end of the film to the other and not find a new idea

or concept.

Nazi-helmeted baddies; light sabres; planet-sized battlewagons; hot-shot, wise-cracking pilots; mystic religions; beautiful princesses; farm boys who grow to manhood seeking vengeance for slain parent figures — there was nothing new from the first minute to the last, except in the way it was presented. *Star Wars* was just a collection of bits from here and pieces from there, not all of which worked but which still made us cry and scream for more, because it was told with a depth of feeling that smacked us like a frosty breeze on a summer day. It caught our attention and made us sad when it was over.

Krull does not have this power. It is a hot, hollow wind which only reminds us of what a pleasant breeze feels like, and angers us because it isn't one.



Superman III

Director	Richard Lester
Producer	Salkind/Spangler
Screenplay	David and Leslie Newman
Music	Ken Thorne
Photography	Robert Paynter
Superman/Kent	Christopher Reeve
Gus Gorman	Richard Pryor
Perry White	Jackie Cooper
Jimmy Olsen	Marc McClure
Lana Lang	Annette O'Toole
Ross Webster	Robert Vaughn
Lois Lane	Margot Kidder

Did anyone ever give you a wonderful toy for Christmas, and then unthinkingly step on it and break it? If that ever happened to you then you were at least prepared for the horror that fell over the rest of us when we sat down to watch *Superman III*.

I thought I was prepared. Unlike many, I had been severely disappointed with *Superman II*, and from the rumors I had heard, knew that *III* was not much better. What I went through in the theater is hard to relate. By the end of *Superman III*, I was seriously considering giving up film reviewing. Reviewers have to see everything, whether they

want to or not. It's their job. After last year's science-fiction and fantasy films, I was beginning to feel there was no longer any fulfillment in my line of work.

By now you have heard (or worse yet, seen for yourself) how bad *Superman III* is. You have read the reviews, heard a fully-justified Christopher Reeve say he will never do another Superman film, watched Warner Brothers stock drop all summer (partly due to *The Twilight Zone — The Movie*, but mostly to *Superman III*). You know *III* is bad, and why it is bad. What no one has explained yet is why it is bad and the

Christopher Reeve appears once again as The Man of Steel in Warner Bros.' *Superman III*.

other two Superman movies in this series were not.

In *Superman: The Movie*, we were presented with a serious, well thought-out film. Although dazzled with special effects, we were also presented with an image of Superman as a man, with a tangible past of pain and denial as well

we appreciated it. But something went wrong. The silliness which had popped up occasionally in the first movie as a balance to some of the more serious moments was much more evident here. The careful structure of story was missing: *Superman II* had many more gaps in logic than its predecessor. Many audi-

runner cartoon, so no one gets hurt . . ."

But you get the idea.

Superman III is the most disappointing picture of the year, and in the year that gave us *Return of the Jedi*, that is saying a lot. *III* is filled with pointless inconsistencies. The few good scenes in the film (Clark with Lana, Superman fighting his evil self, Perry White introducing Daily Planet Jingi), are horribly overshadowed by the worthless and unfunny comedy scenes written for Richard Pryor. Pryor himself is not actually bad; it is only the pointless, boorish things he is given to say and do which make him look the idiot.

All of the regulars from the first two films struggle along doing the best they can with the miserable dribble they were forced to work with, and Annette O'Toole is so perfect as Lana Lang that she and Reeve almost save the film with the few gentle scenes they have together. Almost.

As for everything else, it appears the producers were determined to wring Superman for everything he was worth this time around. The special effects look cheap and unconvincing. The music was just more of Ken Thorne's uninspired John Williams steals. Richard Lester's directing was decidedly uninspired itself. Compared to *Superman: The Movie*, the editing and photography are a joke. But then, compared to the first film in this series, everything about *Superman III* is a joke, a harsh, cruel joke played on all the people who wanted to see more of the Superman they saw a few years ago.

In a way though, this story has a happy ending. Movies like these may find it a bit harder to make it to the theaters after this year. *Krull*, *The Twilight Zone*, and *Superman III* were such financial and ideological failures that studios will be more careful of what they produce in the future. After reading the script, and long before *Superman III* was even made, a professional market analyzer told Warner Bros. that the movie would fail because it made a fool of a hero, and because it tried to make virtues such as truth, justice and the American Way into mean and ugly things.

You just can't do that in front of 50 million Superman fans and get away with it.



as years of family love and moral indoctrination. After that, the film took the fifty-plus years of the Superman legend and made sense of it. Those things from the comics which were useful were kept; those things silly and foolish were thrown out without mention.

Superman: The Movie was the wish of every comics fan in the country come true. No matter that many preferred Spiderman or Daredevil when the film came out — what was delivered was a bigger-than-life fantasy with superior action, direction, and all the rest, that did not look for a way out. Unlike the Batman, Wonder Woman, or Spiderman TV shows, or movies like *Swashbuckler*, *Doc Savage*, or *Swamp Thing*, the creative talents behind *Superman* did not cloak themselves with excuses. They went ahead with a project they believed in and presented it seriously, without the failsafe insurance of campiness or jokes so they could later claim, "Hey, we weren't really serious, you know," to those who might find their intellectual morals suspect.

Once *Superman II* came around, everyone was ready for more of the same. The team proved they had respect for us, the audience, and we were ready to give them our money to show them

ences did not notice the difference, though. A great number were still in awe from the first picture. Other were willing to forgive a few mistakes since the first was so good. Still more thought that the first may have been a tad stuffy, and that the crew had only decided to "loosen things up" a bit in *II*.

Sadly, such was not the case. Most of what was good about *Superman II* had been left over from *I*. When the new creative team took over in *III*, the changes they made were all ones which diminished the hero's integrity. Making Superman a clown seemed the way to make him more "human." After all the trouble the first team had gone through to make Superman a god, to elevate him to the position of all-knowing, all-powerful, and all-loving, the second team decided to make him human.

When *II* did not fail, they decided to go ahead full steam on *III*, making the Man of Steel a complete boob. I've surmised that their reasoning ran something like: "We were stuck with all that *serious* nonsense from the first film, and that's why our stuff wasn't as successful in the second. But now that we're totally in charge, we'll make Superman an idiot, and all his friends morons, and the villains fools, and we'll make it like a Road-

by David J. Schow

See the movie; buy the book.

The word *novelization* has always been in the dictionary, meaning "to convert something into the form of a novel," but inside of the last two decades the term has been distilled to specify a movie screenplay masquerading as a work of literature. Today, a novelization is generally understood to mean a more-or-less final draft shooting script, pumped up to fifteen times its original typographical density, and arranged into arbitrary chapters by that bread-and-butter mercenary of the writing field — God bless 'em — the Writer for Hire.

What we call the novelization now had its genesis in 1939 with the Pocket Books "tie-in" reprinting of James Hilton's novel *Lost Horizon* to augment the success of the 1937 Frank Capra film version. The book, with a cover painting depicting a scene from the movie, sold over a hundred thousand copies, and the lesson that those special covers could help vend many more copies of any novel on which a film was based was not lost on other publishing houses. The vogue for tie-ins peaked in 1959 for two reasons: Television, and the governmental scrutiny focused on the cover illustrations, many of which were judged suggestively, pornographic — smoking pistols, bondage symbology, that sort of thing. With such qualms irrelevant today, tie-ins form a substantial chunk of the movie-book catalog, such reprintings sometimes being termed "movie editions."

The psychology of the tie-in ran thus: A favorably impressed filmgoer is both hungry for reinforcement (having just enjoyed a film, anything derived from that film is a reliable proposition as entertainment) and anxious for a tangible souvenir of that pleasurable viewing experience. Today this concept has been stretched to ridiculous extremes, as the vast garbage dump of merchandising directed toward the *Star Trek* Television show and movie/*Star Wars* movies crowd attests. But from the above-mentioned basic, the next step was an easy one for film producers and book publishers (often the same thing, in this age of co-ops): If a consumer will lay down cash for a tie-in born of a film born of a novel, why not a "novel" born solely of a screenplay?

A few reams of hardcore, boilerplate contractese later, the novelization was itself born.

Considered as a sideline of real literature, a curious side-effect of these purposefully architecture books is that they have claimed the niche vacated by the fast-and-dirty pulp epics of the Depression era.

They are generally pseudonymous, cranked out in a rampant hurry to meet an impossibly immediate deadline at survival wages and no percentage . . . and enough of them can keep an industrious writer in coffee and cigarettes long enough to produce something more personal.

For hacks lacking literary aspirations, novelizations are an accessible way to make a living. Consider: If a 60,000-word book can be stonewalled from a 110-page script in six weeks — the median lead-time offered to such hungry typists at a base rate of, say, \$5,000, then four of them equal a \$20,000 annual income in exchange for six months of actual work. And that's at a *leisurely* production pace: anyone worth his or her writer's hat can bash out one of these hybrid concoctions in a flat two weeks or less, in which case the available time to do more books, income, and time off all magnify.

For legitimate writers, novelizations offer the enormous audience of filmgoers, and a foot in the door of the movie industry as well as if said writer endures long enough (serious editorial consideration by virtue of one's continually recurring byline on a succession of novels).

In the SF field, established names are often found adorning novelizations. The "W. J. Stuart"

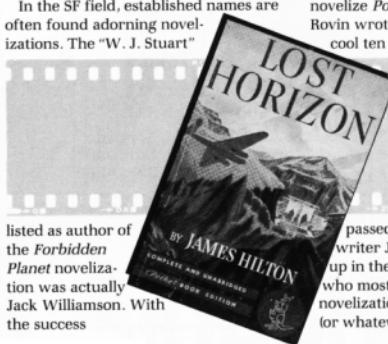
of his *Star Trek* novelizations, James Blish is arguably the father of the entire flood of books, blueprints, and concordances that followed. In 1966 Fritz Leiber did *Tarzan and the Valley of Gold*, which today is a collector's item of far more interest than the Mike Day film on which it is based. The names of John Jakes, Jerry Pournelle, David Gerrold and George Alec Effinger can all be found on *Planet of the Apes* novelizations; ditto Thomas Disch, Hank Stine and David McDaniel for *The Prisoner*.

SF's prima facie case is the career of Alan Dean Foster, who broke through with a series of novelizations based on the *Star Trek* cartoon show and eventually cornered the market with novelizations for *Dark Star*, *Alien*, *Clash of the Titans*, *Outland*, *The Black Hole*, and most recently, *Krull*. Foster gained this position in the genre through his reliable and prolific output, and his authorship of one of the biggest science-fiction novelizations of all time. After the flat fee George Lucas offered for the novelization of *Star Wars* was turned down by two other writers, Foster accepted. He made only \$5,000, but the book's bestseller status cemented his negotiating clout, meaning that all his future work bore his real name. (This story is, of course, complete heresy. It would be heartily discredited by anyone at Lucasfilm, with the contention that the novel's writing style speaks for itself. No argument there.)

Novelizations are often intriguing for who is *not* credited on the cover . . . or involved at all. Stephen King turned down \$25,000 (a record for the field) to novelize *Poltergeist*, and thereafter Jeff Rovin wrote some 60 pages of copy for a cool ten grand before the project was

listed as author of the *Forbidden Planet* novelization was actually Jack Williamson. With the success

passed on, at equivalent rates, to SF writer Joe Haldeman. It finally wound up in the typewriter of James Kahn, who most recently authored the novelization of *Revenge of the Jetsons* (or whatever that film is called.)



One of Philip K. Dick's last gestures was to refuse authorization of a book derived from the screenplay of *Blade Runner*, the film based on his novel *Do Androids Dream of Electric Sheep?* The novel was reissued as a tie-in prominently displaying Harrison Ford's blandly popular mug on the cover, and did as respectfully as a novelization cobble up from the script might have.

This illustrates another trend in novelizations — the round-robin effect. Prior to *The Exorcist*, William Peter Blatty wrote a novel titled *Twinkle, Twinkle, "Killer" Kane*, which he later directed as a film called *The Ninth Configuration*. He then novelized the script to his own film as a separate book. To close the circle, when *The Ninth Configuration* was reissued, prints bore the "new" title of *Twinkle, Twinkle, "Killer" Kane*.

Another case, spanning decades, began in 1938 with the publication of John W. Campbell's "Who Goes There?" in ASTOUNDING Magazine under the pseudonym Don A. Stuart. Twelve years

For hacks lacking literary aspirations, novelizations are an accessible way to make a living.

later, the Charles Lederer screenplay for the Howard Hawks/RKO version of *The Thing from Another World* was "based on the story by Don A. Stuart." In 1982, the Bill Lancaster script for the John Carpenter remake of the Hawks film credited neither Hawks nor Lederer, but was "based on the story 'Who Goes There?' by John W. Campbell, Jr." Then came — what else? — the Alan Dean Foster novelization, "based on a screenplay by Bill Lancaster" . . . forty-four years later.

The worth novelizations have for film historians is bound up in the fact that they are based on shooting scripts, and since a lead time of up to six months is

required for promotion and publicity on a given film, the books frequently contain bits, dialog and action deleted from the final cut. Two strong examples are Kahn's *Poltergeist* — wherein the middle hundred pages explains randomly-linked occurrences in the film, and Vonda McIntyre's *Star Trek II: The Wrath of Kahn*.

But "based on" can cover quite a piece of real estate in terms of artistic license. Scripts are sparse to begin with, with TV scripts even more barren of thought, detail, or wordage. Padding a 15,000-word script to four times the length in order to fill 200-plus book pages often calls for sheer on-the-spot fabrication by the novelizationist. Incidents and dialog thought by some readers to have been excised from the film versions (but appearing in the novelization) may never have crossed the scenarist's mind at all.

At the opposite end of the spectrum are those novelizations done by merely retyping the script into paragraphs and adding quotation marks to dialog . . . the sort of "book" publishers must set in very large, easy-eye type with lots of vertical white space in order to reach page 150. The novelizations to *Halloween III* and *Videodrome* (both by a writer who shall not be named here, but who dedicates one of the books to himself) are word-processor hackery at its least creative.

At their best, novelizations can be what Bill Pronzini (in his fabulous survey book *Gun in Cheek*) dubbed "alternative classics," sort of anti-literature. Quoting one of the kingpins of the novelization trade, Michael Avallone, Pronzini notes such gems of dialog as ". . . she unearthed one of her fabulous breasts from beneath the folds of her skirt." Unfortunately this line is *not* from one of Avallone's many (frequently hysterical) novelizations, but just imagine it on film. It'd be worth financing just to see . . . and then we could read the inevitable novelization of the movie to boot.

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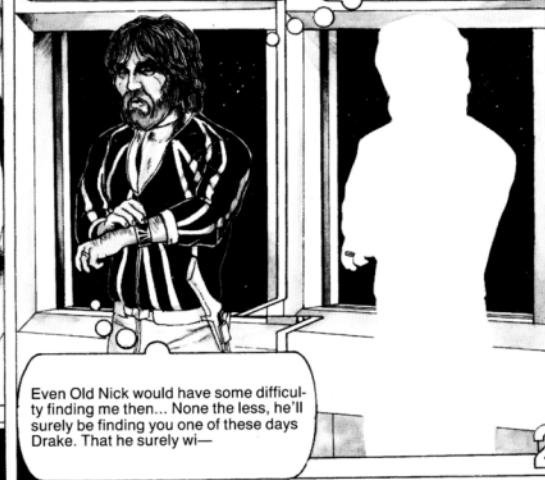
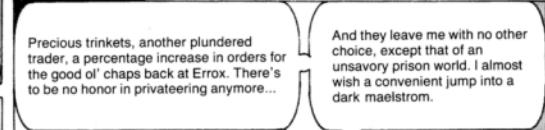
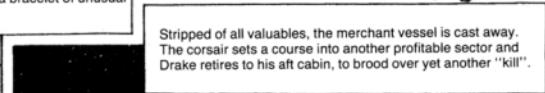
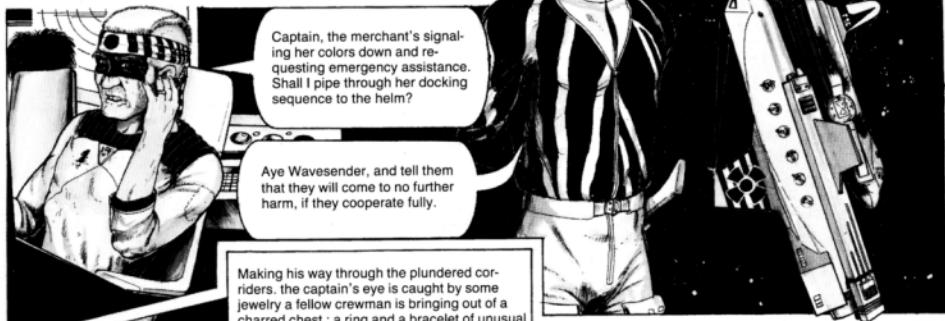
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Silently, shark and prey dock. Airlocks open, and the pirates eagerly begin looting the merchantmen.



Ringshipper

How to use the Feedback Response Card: The Feedback section is an important means for us to learn your interests and opinions. Please read the Feedback ques-

tions below and give us your answers by writing the answer numbers on the card in the response boxes which correspond to each question number.

1. Sex: 1 = Male; 2 = Female.

2. Age: 0 = 15 years old or younger; 1 = 16-19; 2 = 20-24; 3 = 25-29; 4 = 30-34; 5 = 35 years or older.

3. Education: 0 = 8 years or less; 1 = 9-11; 2 = 12 years; 3 = 13-15 years; 4 = 16 years; 5 = 17 years or more.

4. How long have you been playing science-fiction/science-fantasy games? 0 = less than a year; 1 = 1 year; 2 = 2-3 years; 3 = 4-6 years; 4 = 7-9 years; 5 = 10 years or more.

5. What is the average number of times each month you spend playing science-fiction/science-fantasy games? 0 = none; 1 = once or twice; 2 = 3-6 times; 3 = 7-9 times; 4 = 10-15 times; 5 = 16 or more times.

6. Do you currently subscribe to ARES Magazine? 1 = Yes; 2 = No.

7. How many people, including yourself, read your copy of ARES Magazine? 1 = 1; 2 = 2; 3 = 3; 4 = 4; 5 = 5 or more.

8. What do you do with your copy of ARES Magazine when you finish reading it? 1 = throw it away; 2 = pass it to a friend; 3 = save occasional copies; 4 = save most copies; 5 = save all copies.

9. How much of each issue of ARES Magazine do you read thoroughly? 1 = I scan regular columns; 2 = I scan for fiction; 3 = I scan for articles about games I'm interested in but don't play; 4 = I scan for articles about games I play; 5 = I read all of it.

The following questions ask you to rate the articles in ARES Magazine on a scale of: 1 (poor) through 5 (excellent). 0 = no opinion.

10. THE HIGH CRUSADE™ Game

11. Games

12. Books

13. Movies

14. Miniatures

15. Media

16. Letters

17. Cover

18. Are you interested in seeing a regular *Software* column in ARES Magazine? 1 = Yes; 2 = No.

19. Have you ever bought a SF or science-fantasy game because of an article in ARES Magazine? 1 = Yes; 2 = No.

20. Rate ARES Magazine overall: 1 = Poor; 2 = Below average; 3 = Average; 4 = Very good; 5 = Excellent.

The following questions concern science-fiction/science-fantasy games. Pick the one statement that is most true about each game: 0 = I have never seen or played the game; 1 = I have seen others play this game, but have never played it myself; 2 = I do not own a copy, but I occasionally play the game; 3 = I do not own a copy, but I frequently play the game; 4 = I own the game and play it occasionally; 5 = I own the game and play it frequently. Games by other publishers are indicated by initials or names in parentheses.

21. GAMMA WORLD® Game

22. STAR FRONTIERS™ Game

23. UNIVERSE™ Game

24. Traveller® Game (GDW)

25. Space Opera™ Game (FGU)

26. Star Trek™: The RPG (FASA)

27. Aftermath™ Game (FGU)

28. The Morrow Project™ Game (Timeline)

29. Champions™ Game (Hero)

30. Villains & Vigilantes™ Game (FGU)

31. Super World™ Game (CHAOSIUM)

32. Supergame™ Game (DAG)

33. Star Fleet Battles™ Game (TFG)

34. Starfire™ Game (TFG)

35. Ogre™ Game (SJG)

36. Car Wars™ Game (SJG)

37. Striker™ Game (GDW)

38. Laserburn™ Game (Tabletop)

39. Starship Troopers™ Game (AH)

40. The Forever War™ Game (Mayfair)

41. Star Fleet Battle Manual™ Game (Zocchi)

The following questions concern magazines. Pick the one statement that is most true about each magazine. 0 = I have never seen or bought this magazine; 1 = I have never had a subscription to this magazine, but I have bought one or more copies; 2 = I used to subscribe to this magazine, but I no longer buy any issues; 3 = I used to subscribe to this magazine, but I only buy issues at a newsstand or hobby outlet; 4 = I now have a subscription to this magazine for a year or less; 5 = I now have a subscription to this magazine for a year or more.

42. ARES™ Magazine

43. AMAZING™ Magazine

44. The Space Gamer

45. Sorcerer's Apprentice

46. Different Worlds

47. Nexus

48. Journal of the Traveller's Aid Society

49. Autoduel Quarterly

50. Analog

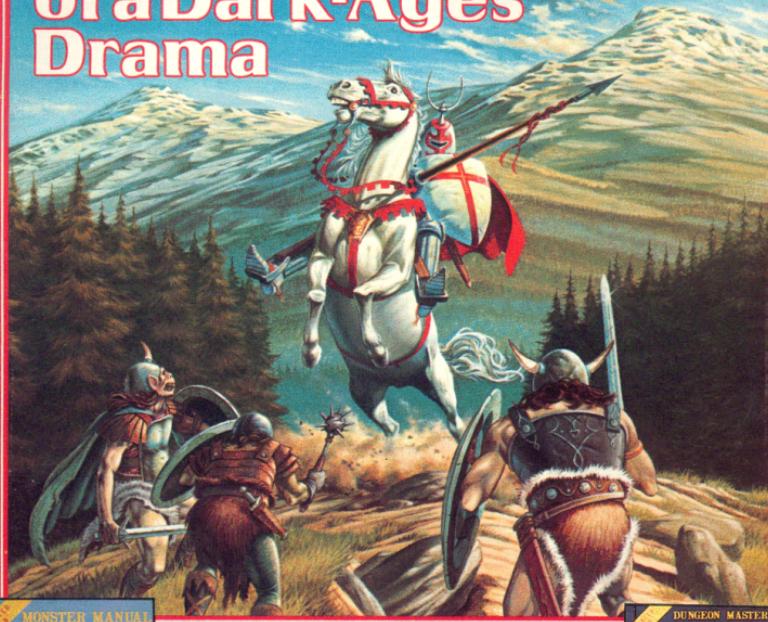
51. Omni

52. Scientific American

53. Astronomy

54. Science Digest

Hardcover Editions of a Dark-Ages Drama

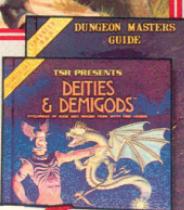


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6 FLEET F 6	6 FLEET G 6	6 FLEET H 6	6 FLEET I 6	EQUIP PTS A	FLEET STR A	FLEET STR B	FLEET STR C	FLEET STR D	FLEET STR E

FLEET STR F ROGER ROGER	FLEET STR G ROGER ROGER	FLEET STR H OWAIN OWAIN	FLEET STR I ROGER OWAIN	FLEET STR ROGER OWAIN	FLEET STR ROGER OWAIN	FLEET STR ROGER OWAIN	FLEET STR ROGER OWAIN	FLEET STR ROGER OWAIN
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NEW POPE ARCH BISHOP ARCH BISHOP	CASTLE CASTLE CASTLE						

CASTLE CASTLE	3	5	6	7	8	9	1	3
ALERT	ALERT	ALERT	ALERT	ALERT	ALERT	ALERT	HOLY GRAIL	GAME TURN

ALERT	ALERT	ALERT	ALERT	ALERT	B. SOR VAN 1	ETHEL BERT 0	P'THNG FLEET A 0	P'THNG FLEET B 1	THRALL LEADER 0
8 JAIR FLEET A	6 JAIR FLEET B	6 JAIR FLEET C	5 JAIR FLEET STR A	5 JAIR FLEET STR B	P'THNG FLEET STR A	P'THNG FLEET STR B	THRALL LEADER 1	THRALL LEADER 0	THRALL LEADER 0

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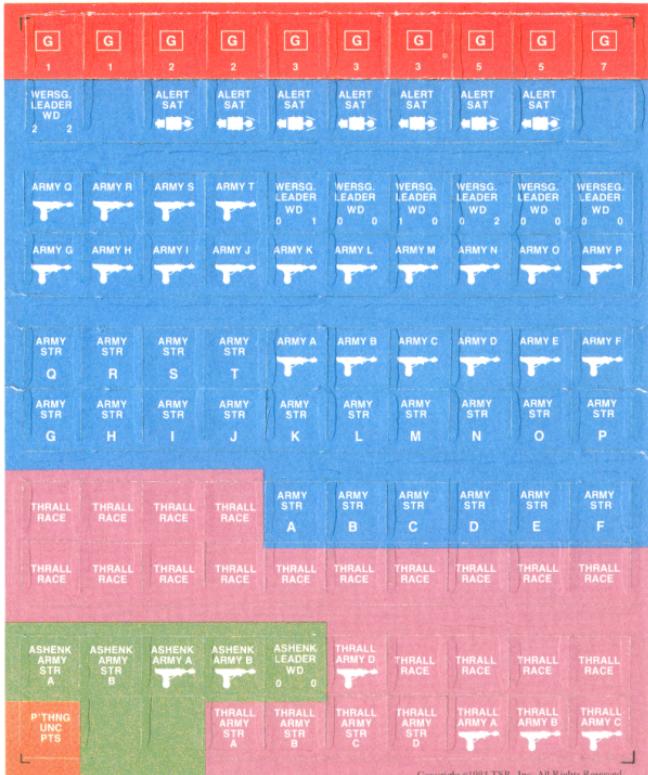
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6 FLEET E FLEET F	6 FLEET G FLEET H	6 FLEET I FLEET J	6 FLEET K FLEET L	6 FLEET M FLEET N					

6 FLEET O FLEET P	6 FLEET Q FLEET R	6 FLEET S FLEET T	6 FLEET STR A	6 FLEET STR B	6 FLEET STR C	6 FLEET STR D	6 FLEET STR E	6 FLEET STR F	6 FLEET STR G

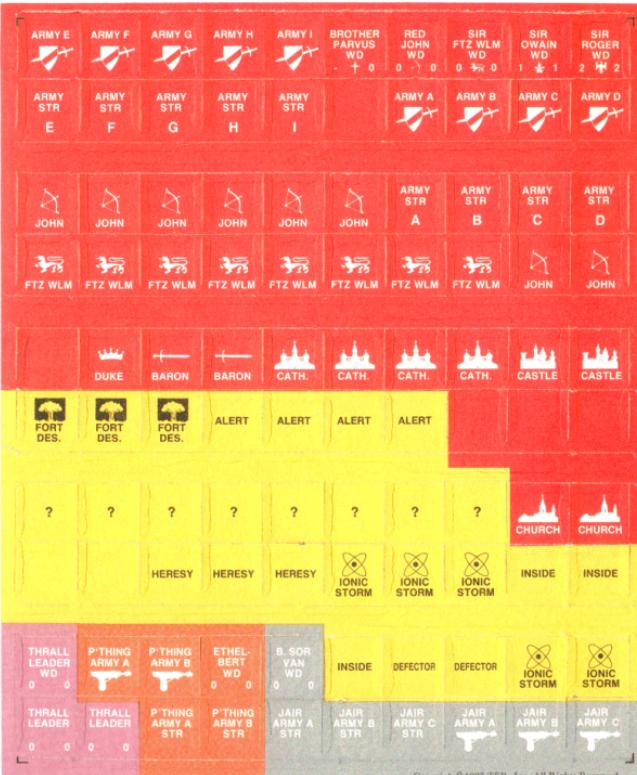
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3 A	3 W	2 W	3 A	1 S	3 A	4 A	4 A	1 S	5 W

2 A	6 A	5 A	6 W	5 THRALL FLEET A 2	1 ASHENK LEADER 0	9 ASHENK FLEET B 1	5 ASHENK FLEET A 0	ASHENK FLEET B 0	ASHENK UNC PTS 3
6 THRALL FLEET B 4	6 THRALL FLEET C 3	6 THRALL FLEET D 5	THRALL FLEET STR A	THRALL FLEET STR B	THRALL FLEET STR C	THRALL FLEET STR D	CRUSADER UNC PTS 2	JAIR UNC PTS 3	ASHENK UNC PTS 3

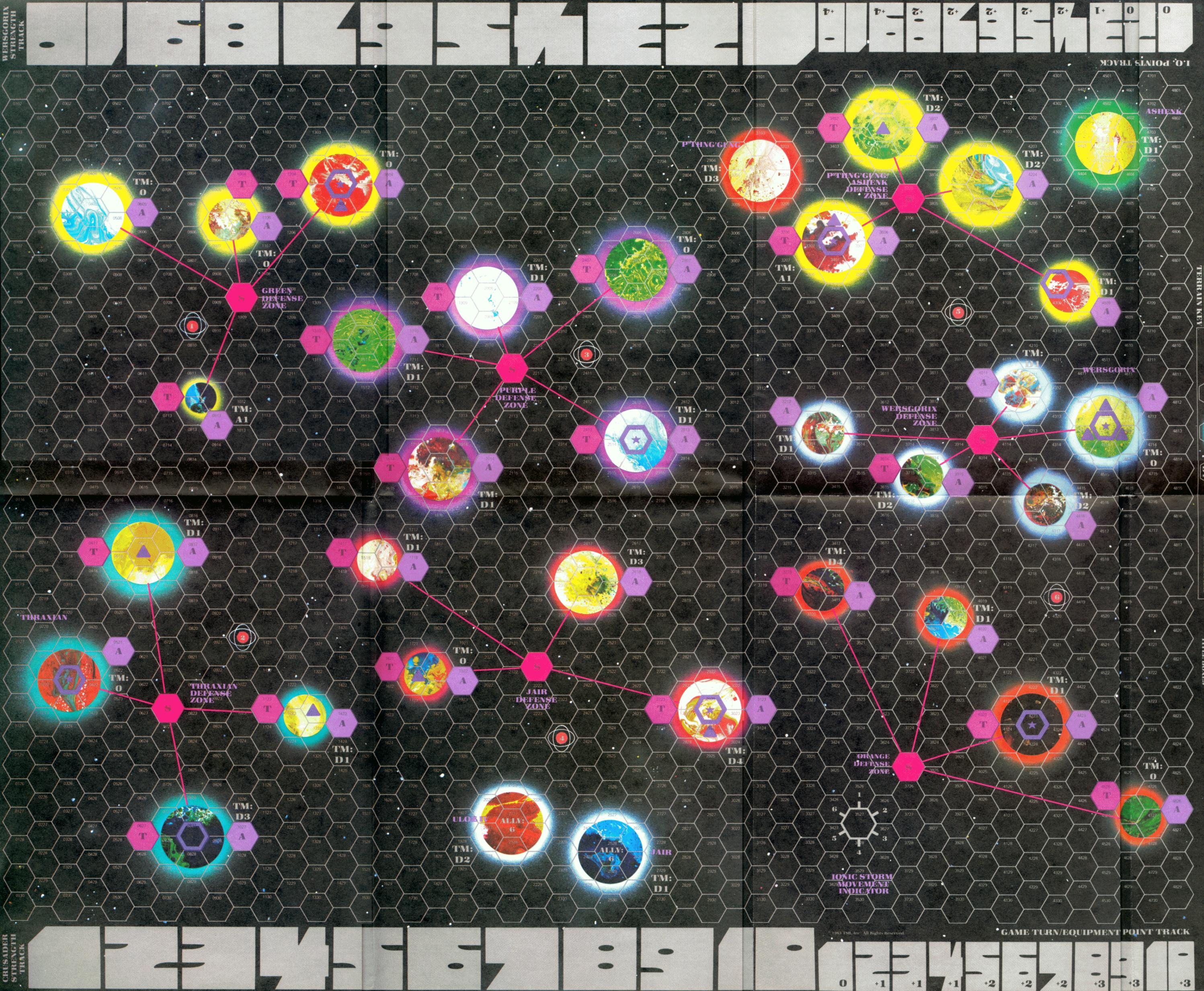
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CRUSADER COMBAT TABLE

Combat Strength Differential

Die Roll	-10 or less	-9 to -6	-5 to -3	-2 to 2	3 to 5	6 to 9	10 or more
A8/17	A7/16	A4/15	A2/13	A1/12	D2/11	D4/11	D5/11
3	D2/12	D3/12	D4/12	D5/12	D6/12	D7/12	D8/12
4	A2/13	A1/14	A1/13	A1/12	A1/11	A1/10	A1/10
5	A1/12	A1/13	A1/12	A1/11	A1/10	A1/9	A1/9
6	A2/13	A1/14	A1/13	A1/12	A1/11	A1/10	A1/10
7	A3/13	A2/13	A1/12	A1/11	A1/10	A1/9	A1/9
8	A2/12	A1/11	A1/10	A1/9	A1/8	A1/7	A1/7
9	A2/12	A1/11	A1/10	A1/9	A1/8	A1/7	A1/7
10	A2/12	A1/11	A1/10	A1/9	A1/8	A1/7	A1/7
11	D4/14	D2/12	D1/12	D1/11	D1/10	D1/9	D1/9
12	D2/12	D3/13	D4/13	D5/13	D6/13	D7/13	D8/13

RESULTS
The result to the left of the slash applies to Fleet combat only.
The result to the right of the slash applies to Army combat only.
A# — Strength points lost by attacker
D# — Strength points lost by defender
— No effect

WERSGORIX COMBAT TABLE (use for Crusader Ally attacks)

RANDOM EVENTS TABLE

ABBREVIATED COURSE OF PLAY

SIR ROGER	SIR OMAN
SIR FITZ-WILLIAM	RED JOHN

CRUSADER COMBAT TABLE

Crusader combat results are explained in PART XI.

CRUSADER STRENGTH DIFFERENTIAL

Die Roll	-10 or less	-9 to -6	-5 to -3	-2 to 2	3 to 5	6 to 9	10 or more
2	4/17	9/16	9/15	2/17	1/17	2/16	3/16
3	9/17	2/17	1/17	1/16	1/15	3/17	8/17
4	1/16	1/15	1/14	1/13	1/12	5/17	6/17
5	6/16	9/16	9/15	3/17	3/16	3/15	6/17
6	6/16	9/16	9/15	3/17	3/16	3/15	6/17
7	7/16	7/15	7/14	7/13	7/12	7/17	10/17
8	7/16	7/15	7/14	7/13	7/12	7/17	10/17
9	8/16	8/15	8/14	8/13	8/12	8/17	11/17
10	8/16	8/15	8/14	8/13	8/12	8/17	11/17
11	10/16	10/15	10/14	10/13	10/12	10/17	12/17
12	10/16	10/15	10/14	10/13	10/12	10/17	12/17

RESULTS
The result to the left of the slash applies to Fleet combat only.
The result to the right of the slash applies to Army combat only.
A# — Strength points lost by attacker
D# — Strength points lost by defender
— No effect

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